Blockchain Powered Supply Chain Protocol

Whitepaper V5

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EXECUTIVE SUMMARY

What is Hercules?

Hercules, a Special Economic Zone Company (SEZC) is a software development company that provides supply chain management software that utilizes public blockchains. The Hercules platform is decentralized and powered by HERC tokens which are required to record and validate the supply chain data. Hercules software is fully open source.

Hercules Simplified

Users on the Hercules platform can create a custom supply chain by defining the items to be tracked and the information to be recorded about each item as it passes through the supply chain. In addition to text-based data, photos and video files can also be stored. The Hercules mobile application then allows authorized users to record and track the user-configured data for each item in the supply chain. The data is encrypted and stored securely and immutably on third-party decentralized storage platforms incorporated into Hercules.

To further secure the information, cryptographic hashes of the data are created, stored and indexed utilizing the Factom protocol. The indexing works in a manner similar to library indexing cards, but instead of being stored in a filing cabinet, the indexing information is written to the Factom blockchain, where it is subsequently anchored by the Bitcoin blockchain. These indexing entries cannot be altered in any way, are completely transparent, and publicly viewable. However, the underlying data remains completely private, viewable only by authorized users through our 2nd layer identity solution Edge Secure (edgesecure.co).

In addition to intra-company supply chain management, Hercules is even more powerful when utilized for more complex supply chains with multiple entities contributing data. Since Hercules is blockchain-based, the supply chain data is a common, shared ledger accessible by all the participants. Therefore, instead of each party in the supply chain maintaining its own records, which creates inconsistencies in traditional supply chain management environments, the Hercules protocol enables all participants in any given supply chain to share data transparently which helps reduce many of the problems plaguing complex supply chains today.

HIPR - PoHW

To validate the information and to ensure the integrity of data in the system, we created the Hercules validating protocol called Human Initiated Performance Reporting (HIPR pronounced hyp-er) which validates transactions through proof of human work (PoHW). For every supply chain data entry a smart contract running on the Ethereum network compares the information to previous entries to ensure nothing has changed, and that information is being recorded in both instances about the same item. Comparison of any two data sets can also be initiated by users about any item on demand. If the data entries do not match, the user knows that the supply chain has been compromised or an item has been altered. Furthermore, once data is entered into the system, it can be checked on a regular basis to ensure that the data has not been altered.

The Utility of HERC

HERC tokens are ERC777 tokens that act as “software keys” to access and unlock the information on the Hercules protocol. By staking 1,000 HERCs in their wallet, the user can create a Hercules supply chain. HERC tokens are also required to record data to the supply chain and to review the indexing information stored by the platform, at the cost of ~$.001 per kB of indexing information or $.000032 per Hercules entry, and to pay the third-party decentralized storage platform fees. Finally, HERC tokens are also used to incentivize participation in the HIPR validation process.

THE PROBLEM

Supply chain management presents many challenges, which arise from the method by which companies input, store, and validate data about their supply chain in their management software.

The problem is significant. It is difficult to find specific data on the amount of supply chain losses in most industries, but the following information on the global food industry provides perspective on the magnitude of the problem.

[The British Standards Institute has said in a report that losses caused by global supply chain disruptions totaled $56 billion in 2015, reported The Loadstar. Extreme weather, terrorist threats, crime and the European migrant crisis hit the global supply chain in 2015, BSI said. About $22.6 billion was lost globally due to cargo crime, the report said." (Source: https://www.businessinsurance.com/article/20160325/NEWS09/160329854/global-supply-chain-disruption-cost-56-billion-in-2015-report)]

Additionally, as per a recent article in Forbes:

Shared Data Enables Collaboration. Problem solving requires access to reliable information as a basis for generating ideas and making decisions. But it can be difficult to get partners on the same page as far as where that data should come from, how much to share, and how to manage it. 47% of B2B company leaders in a recent Forrester survey indicated that the biggest thing preventing them from creating actionable insights from their data was data quality; managing data from multiple sources was a challenge for 43% of those surveyed."
(Source: https://www.forbes.com/sites/larrymyler/2017/09/11/data-sharing-can-be-a-catalyst-for-b2b-innovation/)

As evidence of the importance placed on supply chain issues, a June 2017 report from Gartner, Inc., and S&P 500 research and advisory company, indicates that companies will have spent $13 billion by the end of 2017 just on supply chain management software, and they estimate annual sales to exceed $19 billion by 2021. The report references the rapid shift to digitalization as a main factor in the increase in demand for such software as such "technology [is] more attractive to small and midsize businesses and organizations in emerging markets, therefore expanding the addressable market and increasing overall spending."

What are some of the main causes of supply chain problems that lead groups to spend so much money on trying to fix it? Well, the 2016 BCI Supply Chain Resilience Report, which was produced in association with Zurich Insurance Group (with 526 respondents in 64 countries participating) revealed that "66% do not have full visibility of supply chains, 70% experienced at least 1 supply chain disruption, 41% of disruptions occur at Tier 1, and 40% do not analyze the source of disruption." They listed the three top causes of supply chain disruption as:

- unplanned IT and telecommunications outage.
- loss of talent or skill.
- cyber attack and data breach.

All three deficiencies endure as a systemic shortcoming of today's centralized information technology systems. Information does not get flawlessly shared between the different participants because of human error (a result of turnover in the talent pool), lack of data interconnectivity (from IT problems and data breaches), and lack of transparency (a result of all three). Information continues to "fall through the cracks" causing great cost to all involved.

THE HERCULES SOLUTION

The Inspiration

The Hercules technology was inspired by a company owned by the HERC Executive team, the company is developing a gold-backed crypto token called (AGLD). After collaborative efforts between both entities, AGLD happens to be the first client of the Hercules blockchain protocol which helps prove and validate the gold content, purity, existence, and location of the gold bars backing each AGLD token along the supply chain. Hercules SEZC, was incorporated in November, 2017 and is headquartered in Grand Cayman. Although gold validation is the first use case for Hercules, this blockchain data management software technology can and will be used for many other use cases such as other precious metals, retail verticals, B2B enterprises, petro chemicals, automotive and food industries, just to name a few.

The Hercules platform leverages its blockchain technology by offering a supply chain management solution that provides:

1. Flexibility, by enabling users to define the items to be tracked and the data elements to be entered for each item.
2. User-definable permissioned-level sharing of data both inside an organization and with partner enterprises in the supply chain.
3. Fully decentralized solution with no single point of failure.
4. Secure and immutable data storage.
5. Data validation on an ongoing basis and on-demand.

Flexibility

Through the Hercules protocol, users can define the items to be tracked in a given supply chain, as well as the type of information that will be tracked for each item. The information can include data elements (e.g. serial number, weight, etc.), as well as photographs and video files. While the Hercules software currently only supports certain data types, it is fully open source and can be customized and adapted to fit the needs of a particular supply chain. Once a supply chain has been created and defined, the Hercules platform can be used to gather the user-defined information at any desired stage in the supply chain, from raw components to finished retail goods.

Configurable Data Entry and Sharing

The supply chain creator defines who has access to their Hercules supply chain data. Specific users can be authorized to record information relating to items in the supply chain and/or to access the data. Access can be given to users within an enterprise and to any other participants in the supply chain. The Hercules blockchain infrastructure allows all of users in a supply chain to share a single, common set of data, which significantly reduces the myriad of problems that result from different parties in the same supply chain - maintaining separate - and often conflicting records regarding the items in the supply chain. Integrating the Hercules supply chain management tool as an internal control shifts the traditional channel arrangements from loosely linked groups of independent businesses to a coordinated initiative - which increases market impact and reduces risk.

Decentralization

Unlike legacy supply chain management solutions, there is no central store of data in the Hercules platform. Instead, all of the information created and tracked through the Hercules platform is stored on third-party decentralized storage platforms such as STORJ and IPFS.

Since the core Hercules software runs on the Ethereum network, the participants in a multi-party supply chain do not have to rely on a single participant to operate the Hercules platform. Because both the data storage and the core processor are decentralized, there are no single points of failure in the Hercules ecosystem.

Secure and Immutable Data Storage

The decentralized data storage solutions that Hercules leverages (IPFS and STORJ) adds an additional layer of security on the supply chain data. Whenever data is written to the platform, a time-stamped hash of the data is stored in a Factom data chain, where it is ultimately anchored into the Bitcoin blockchain for even greater data integrity enabling "provable immutability." Therefore, data can be hashed at any time, and that hash can be compared to the time-stamped hash of the data stored by the Hercules platform. If the two hashes are not the same, then it is not the same data.

Validation

Once data is recorded on the Hercules platform, anyone with the permissions can access this information for validation at anytime. The Hercules validation process utilizes the assetValidation.sol smart contract running on the Ethereum blockchain to compare two data sets relating to an item recorded at different stages in the supply chain to confirm that the data is the same, and confirming it's the same asset. Moreover, through the HIPR system, supply chain creators can crowdsource ongoing validation of their supply chain data, to proactively flag inconsistent data.

The Hercules Blockchain

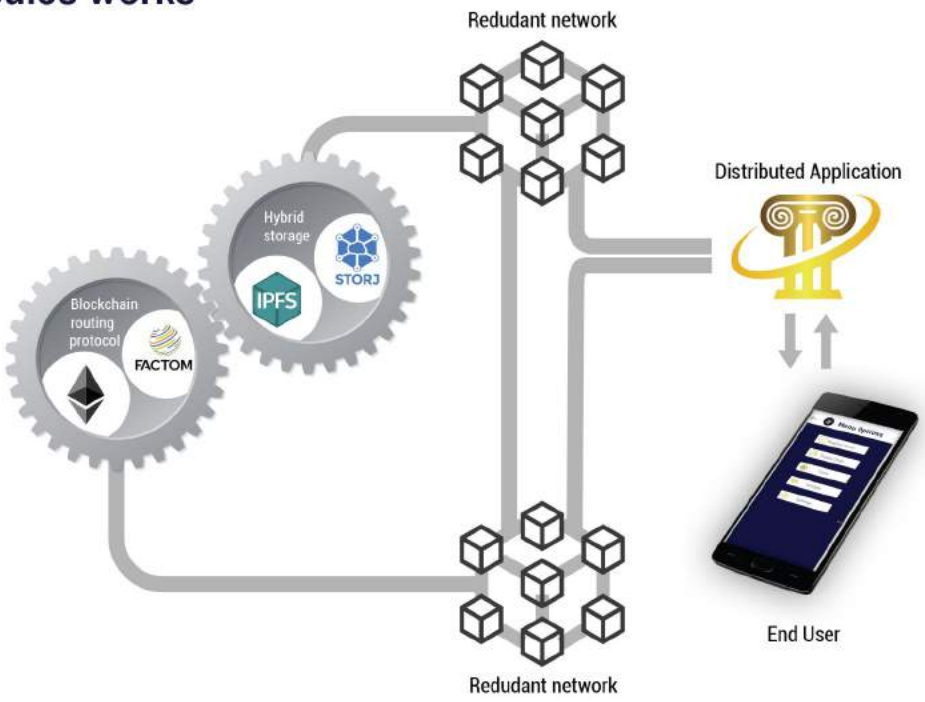
Why Blockchain?

Due to Blockchain's immutability and distributed data integrity - it places a digital fingerprint on data, therefore, any attempt to change data would become apparent and be immediately known to the rest of the distributed network.

A multi-layered Blockchain solution enables the technology that allows for immediate approval through third-party audits the moment a transaction occurs. Through IPFS, STORJ, and Factom, the Hercules platform allows digital layers of defined trusted information to be shared among specific parties in an open community that shares and supports the Hercules ecosystem by staking and utilizing the HERC token.

Unlike centralized traditional systems of data recording (handwritten or computer-generated tables), Hercules will allow for the uploading of pertinent documents to decentralized storage solutions along the supply chain. This will allow specific items attached to a data set to be monitored along the supply chain immutably.

How Hercules works



(Figure 1): An illustration of the utilization of Hercules platform

The Hercules platform is a decentralized application, built on the Ethereum blockchain. Its core components include:

1. The Hercules mobile application, which allows users to define and track items through user-configurable supply chains.
2. Ethereum smart contracts that manage and validate user-entered data.
3. Third-party blockchain platforms that provide storage solutions through which user-entered data is stored securely and immutably.
4. The HERC token, an ERC777 token, which is required to access the platform.

The Hercules Decentralized Application

The Hercules decentralized application is the user interface for the multi-layered HERC blockchain protocol platform. It will be available for both Android and iOS devices in the respective app stores and in the form of a web3 decentralized application. It is a DApp utilising the HERC protocol that interacts with the core Hercules smart contracts, as well as, the various third-party decentralized storage solutions incorporated into the Hercules solution.

In addition to the flexibility the user gets from creating a custom supply chain with predefined tracking items and information, the application can be customized as necessary to meet the requirements of a given supply chain. Users can do this development themselves, or, can evoke the Hercules software development team to build a supply chain for them.

The supply chain creator also determines who can record data to the supply chain. Once a user is authorized, they are able to use the Hercules application to enter text and numerical data about items in the supply chain, as well as, photographs and videos of items, if those elements have been specified for the supply chain in question.

Participants in the supply chain can also use the Hercules application to view information about items as they pass through the supply chain and to validate the data. In order to protect proprietary information, the ability to view specific information elements can be limited to authorized users only through the encrypted identity environment provided by Edge Secure.

Hercules Core Smart Contracts

The core of the Hercules platform is composed of Ethereum smart contract sets that manage the process of tracking items through a supply chain. When a Hercules user initially defines a new supply chain, the Hercules application configures, creates, and deploys a unique set of the smart contracts for that particular supply chain.

The core smart contracts consist of the following:

assetTracking.sol This smart contract creates a structure for the items to be tracked in the supply chain and manages the identification of each unique instance of an item in the supply chain.

assetMeasure.sol This smart contract manages the interface between the Ethereum network and the third-party storage solutions - utilized by the Hercules platform. The HERC token is the medium of exchange between multiple different protocols within the Hercules platform. The assetMeasure contract weighs the data cost for uploading and retrieving information in the value chain. As well as, handling the movement of HERCs that the supply chain manager needs to register a new value chain and the amount for the digital viewer.

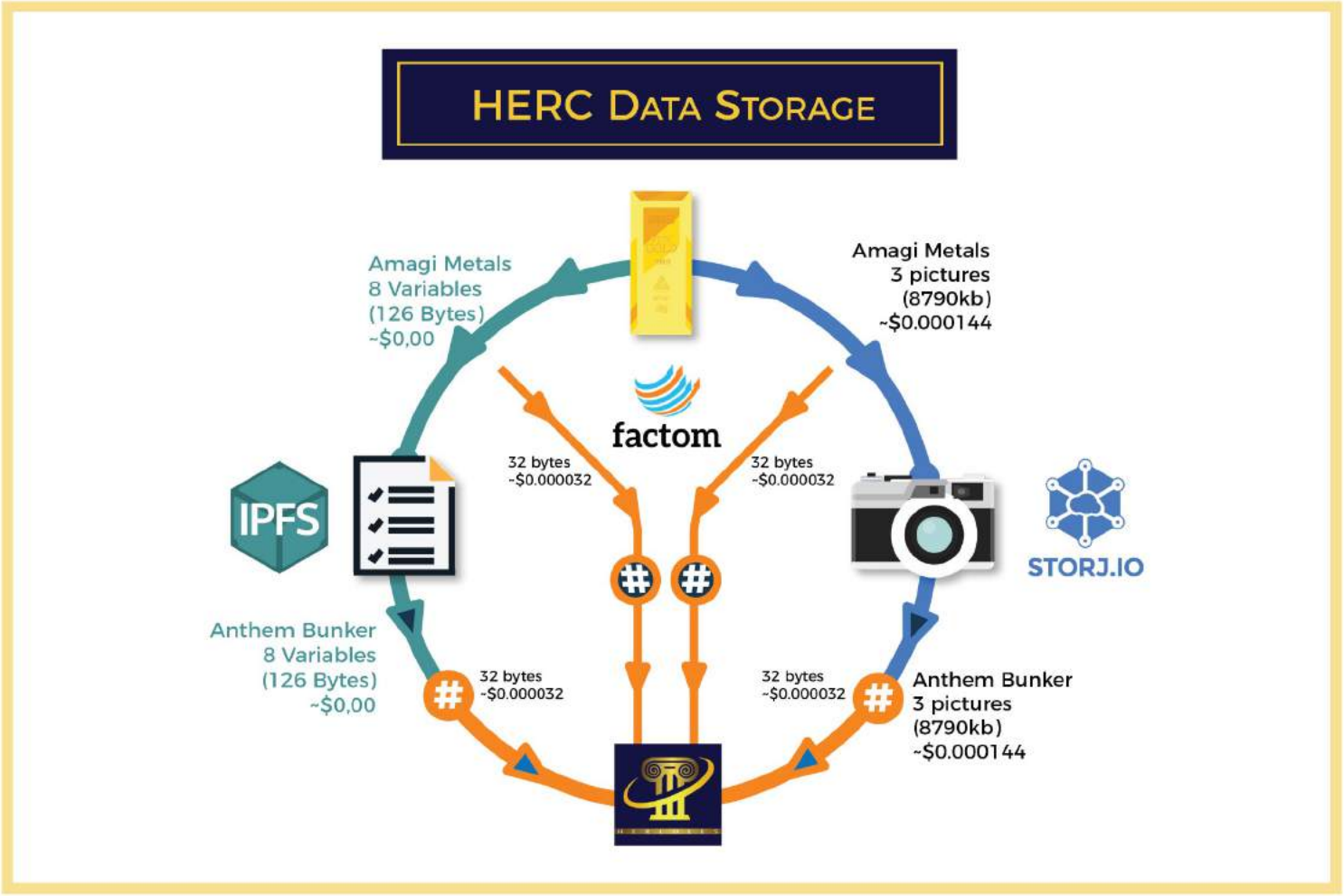
assetValidation.sol This smart contract provides the ability to verify items in the supply chain. It compares the data recorded about an item at different stages in the supply chain process to ensure that the data is the same, confirming the identity of the item and that it has not been altered. Authorized users can initiate the verification process for an item at any point during the item's passage through the supply chain. The assetValidation contract is also utilized by HIPR, the Hercules solution component that provides ongoing verification of items in the supply chain.

Decentralized Storage and Data Management

While Hercules uses the Ethereum protocol to create the framework for managing and recording data about supply chain items, the data itself is not stored on the Ethereum blockchain. Rather, depending on the file-type, the data is written to one of the third-party decentralized data storage platforms integrated into the Hercules platform. Currently, IPFS is used for text-based data elements, while photo and video files are stored in STORJ.

Hercules can also be easily configured to work with other solutions. The data is encrypted before being written and is further protected by being stored on a distributed basis.

The Hercules software (apart from the Ethereum core contracts) is entirely "client-side," i.e. there is no central server to, and from, which the Hercules application writes and reads data. Instead, the application writes organizing data to IPFS, allowing coordination among various users. Therefore, IPFS plays a significant role in the Hercules platform that helps make its unique architecture possible.



(Figure 2): An illustration of Data Storage on the Hercules Platform

The HERC Token

The HERC utility token is the engine that powers the Hercules platform. HERC tokens are required to create a supply chain and to write or read data to and from the supply chain. They can be thought of as "software keys" to access and unlock information.

In order to create a supply chain on the Hercules platform, the Hercules user is required to obtain and "stake" 1,000 HERCs. Thereafter, data can be recorded or viewed at a cost of ~$.001 per kB of data or $.000032 per entry as each Hercules hash into Factom is 32 bytes, plus, in the case of recording, the costs of the third-party storage provider and Factom. The user pays the total amount in a single HERC payment, as calculated by the Hercules platform. Moreover, the exchange contract converts the appropriate amount of the paid HERC to the protocol token utilized by the storage solution, e.g. STORJ coins for STORJ or Factoids for Factom (there is currently no cost for using IPFS as intended in the Hercules platform), and automates the process of paying the third-party protocol. The remainder of the HERC, i.e. the payment for the Hercules ~$.001/kB read/write charge is burned. No portion of the payment is received by Hercules as revenue.

ERC 777

Aiming to continuously be up to date with the latest blockchain technologies, we have taken the initiative to make the HERC tokens issued as ERC777 tokens, which is the latest Ethereum based standard that aims to resolve the problems of the ERC20. Since 2016, millions of dollars were lost from the Ethereum ecosystem due to the lack of transaction handling mechanisms in the ERC20 standard.

Ethereum lacks the ability to know what functions its contracts implement, ERC777 uses contract interface recognition, which allows anyone to enforce address registry to make sure that it supports a specific function. ERC777 also utilizes mint and burn function, making it easier to be adopted, especially in the supply chain industry.

HERC Token Use Case Example

For example, consider the use of HERC in connection with recording information about a gold bar in the AGLD supply chain. For the verification of a 1kg bar in the Hercules Platform a verification system has been implemented. First, the variables that define the AGLD supply chain (i.e. the purity, weight, date processed, mint, supplier, location in the vault, bar serial, and bar-id) are uploaded into IPFS at 128 bytes with a zero cost associated. Next, the pictures of the bar are uploaded to Storj's decentralized file system at a live rate of Storj with a cost associated being ~$0.00000002 / kb or an average ~$0.0003516 for all 6 photos at 17,580 kb average. Last, the hashes associated with the location of the Storj and IPFS uploads are encrypted into the HERC - Factom Sidechain for later reference. The Factoids necessary for the Entry Credits will be at a live rate; however, the cost associated with the action of 4 hash files being 128 bytes at ~$0.001/kb is equal to ~$0.000128. All in all, the cost associated with wholly verifying a 1kg bar from origin to destination is ~$0.0004796 and will be managed at a live rate per HERC token price.

Please refer to the end of the whitepaper to see the full case study.

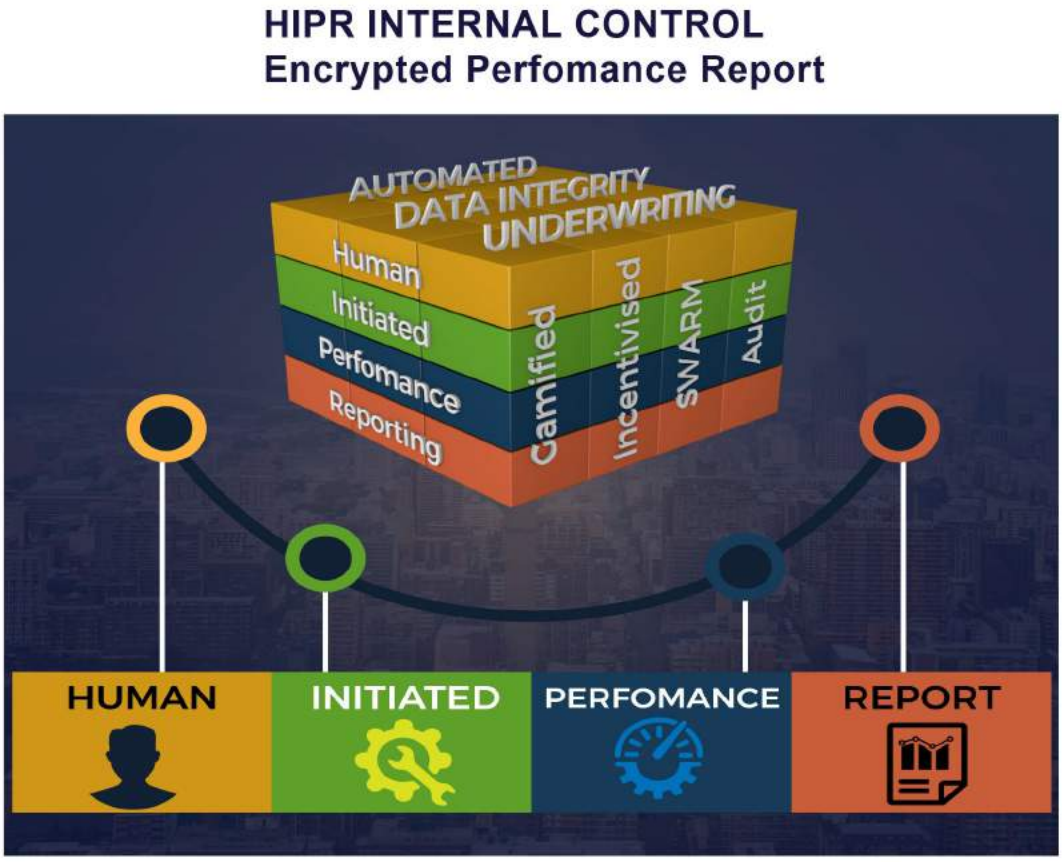
HIPR Verification Process

Human Initiated Performance report (HIPR), is HERCs unique way of validating transactions - through proof of human work (PoHW). This Consensus model is new and effective and the process goes as follows: when information is being sent to HERC on the blockchain, for example, two receipts are sent to the Hercules platform, "supposedly" two identical receipts, one from the supply chain manager and the other from the item provider, the receipts are not validated until an actual human goes to HIPR, plays the game, earnsa Herc token for playing and verifying. Only then does the smart contract get approved if identical or in the case of invalidity, an error comes up and the contract is not executed. The smart contracts are randomly assigned from the backend, and any player that decides to mine, is capable of doing so, by playing HIPR and approving a transaction. The assetValidation.sol smart contract reads the metric arrays (lists) and does a checksum on both. The assetValidation smart contract will then send the supply chain managers a Performance Report of the asset.

From a technology standpoint, HIPR is the one of the most secure and efficient ways to approve transactions on the blockchain, without wasting energy, time, or physical resources since transactions have to be validated by actual humans and not - bots, machines, or rigs. HIPR serves as a transaction validator as well as a CAPTCHA. The HIPR game is built on Unity3D, with C# and targeting WebGL.

The PoHW validation via HIPR introduced by Hercules is a further modified and enhanced consensus protocol of the PoW, which utilizes the human intelligence and the blockchain capability to prevent network abuses, spam and service attacks, introducing a breakthrough in the future of secured supply chain records and transactions.

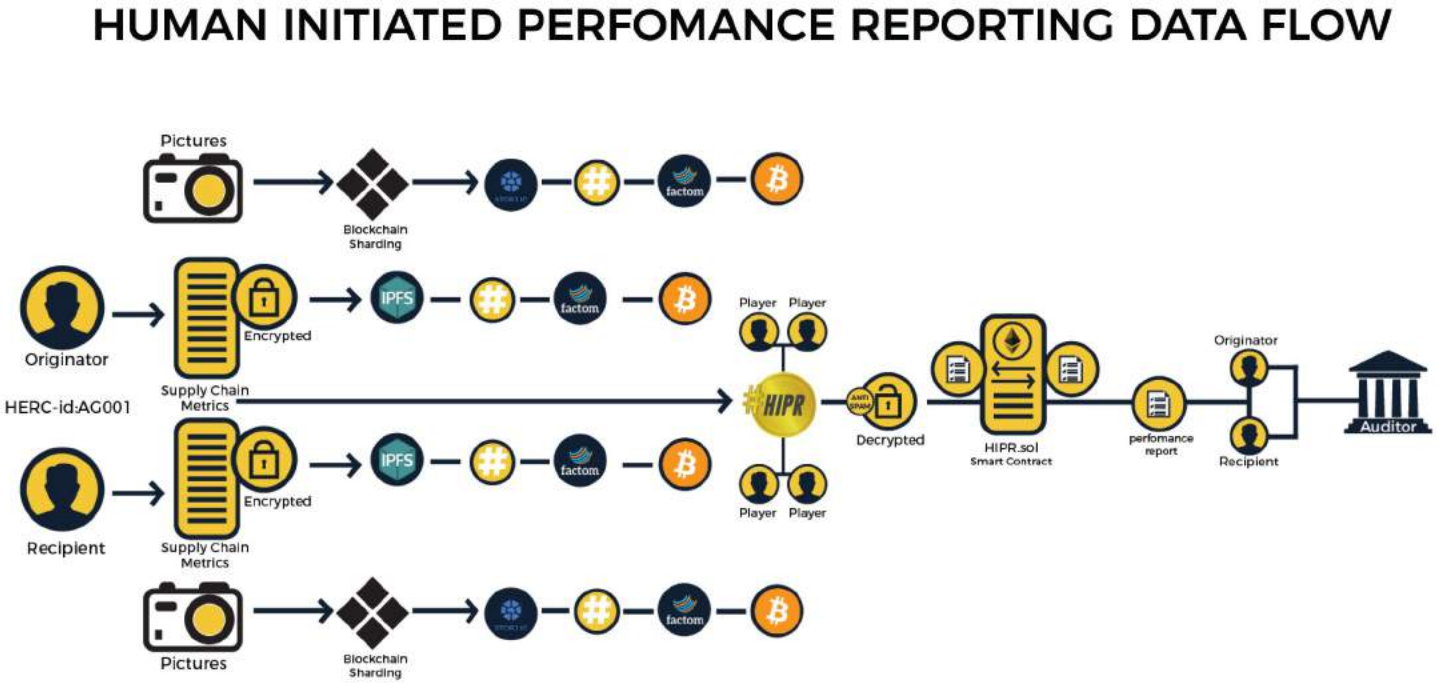
For more details, please click **here**. If interested in trying HIPR please click **here**.



(Figure 3): An illustration of HIPR ongoing validation on the Hercules Platform

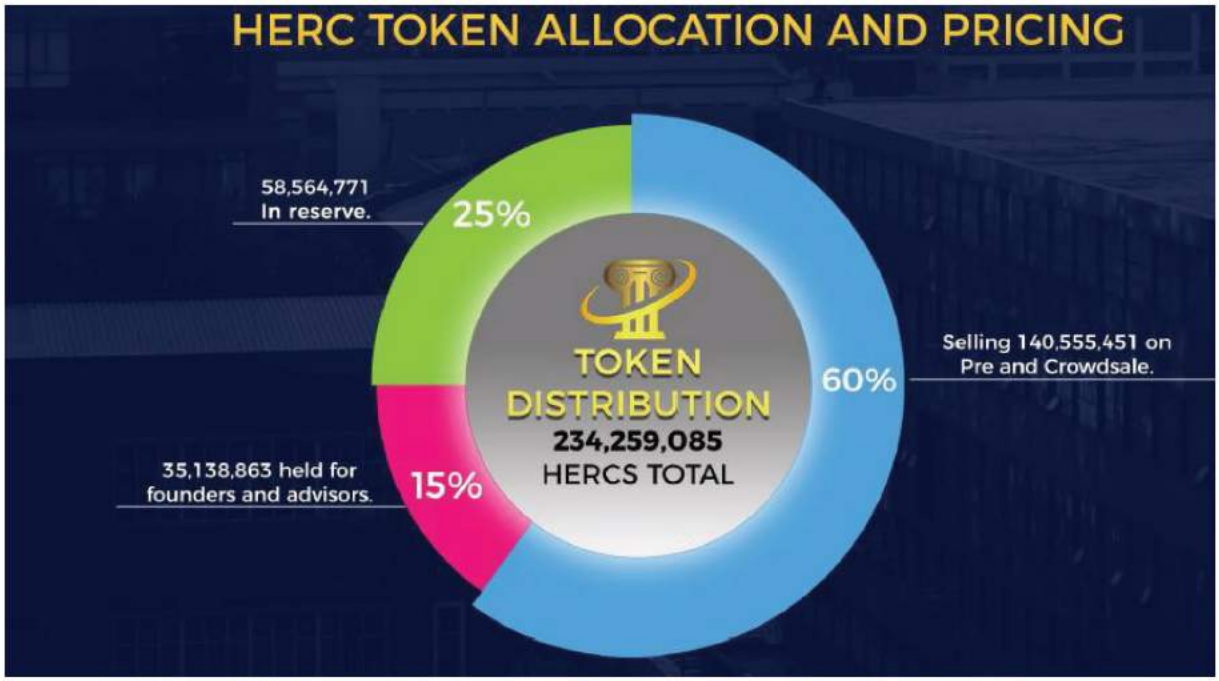
To further elaborate, HIPR utilizes a steganography script to make the Hercules protocol cryptographically secure. Due to the open source nature of the project any Nethereum Unity game created by the Hercules community whereby the human motions of a player's actions create a fun, interactive "I am not a robot/Captcha" could be voted into the internal control protocol. This sophisticated feature protects against bad actors while maintaining the core function of comparing data sets on an ongoing basis. Not wanting the contract running continuously, we impose the HIPR game as a PoHW (Proof of Human Work) style device to make it arbitrarily difficult to run the contract. When the puzzle is solved, the underlying technology triggers the sending of data to the assetValidation.sol contract.

In order to incentivize participation in HIPR, game players are awarded with HERC tokens as a reward. The Hercules team is working with the Edge Security wallet team, which is the same team behind the Airbitz wallet to ensure the maximum security for the Hercules wallets.



(Figure 4): An illustration of HIPR Data Flow on the Hercules Platform

HERC Token Metrics



Total tokens to be generated	234,259,085
Retained tokens	(58,564,771)
Shareholder/founder tokens	(35,138,863)
Total pre-launch sales as of Oct. 29 @ $0.20	(12,246,806)
Total available for remaining pre-launch sales and crowdsale*	128,308,645

* This remainder will continue to be sold at $0.20 per token until the anticipated launch of Hercules and the HERC token in late-October through our pre-launch sales. All that remains at launch will be offered in our crowdsale at $0.40 per token for up to 12 months after launch. Any tokens left unsold in the crowdsale twelve months after the beginning of the crowdsale will be destroyed.

THE HERCULES CORE TEAM

Executive Team

ANTHEM BLANCHARD
Chief Executive Officer

Anthem is the Co-Founder and CEO of Hercules. He also co-founded precious metals/fintech company Anthem Vault, Inc., and also serves as their CEO. He has hands-on fintech experience and comes from precious metals backgrounds. Anthem is the son of the legendary goldbug and precious metals pioneer, James U. Blanchard III, who helped restore Americans' right to own gold and also founded rare coin and bullion company, Blanchard & Company. Anthem served as Director of Strategic Development and Marketing with GoldMoney and helped develop and implement their current business model, overseeing marketing and product development efforts which resulted in an increase of total value held by the company from $1 million in 2002 to $368 million by 2008. Between 2010-2013 Anthem served as an independent director and member of the audit committee, compensation committee, and nominating committee at Pernix Therapeutics Holdings Inc. Anthem holds a Bachelor of Business Administration from Goizueta Business School at Emory University.

CYNTHIA BLANCHARD
President

Cynthia is the Co-Founder and President of Hercules. She is also the Co-Founder and President of the precious metals fintech company Anthem Vault, Inc., which has successfully been in business for over seven years. Prior to delving into the fintech and blockchain industry, Cynthia owned and operated Harry Max Music Publishing Company in Nashville, TN. and is an accomplished singer who has contributed background vocals on numerous country albums including by artists Reba McEntire and the late Mindy McCready. Cynthia is also the author of the novel titled Humanville which focuses on helping individuals overcome eating disorders. She helped start the Eating Disorders Coalition of Tennessee (EDCT), and has been a national public speaker on related issues. Cynthia holds Bachelor of Science and Masters in Arts Administration degrees from Oklahoma State University.

LOGAN GOLEMA
Chief Technology Officer

At 26, Logan has been heralded as a Blockchain Developer and Educator, FinTech Innovator, and seen as highly skilled in object based coding and distributed networking both in enterprise and private applications. With a lifetime of coding experience Logan finds his place in Blockchain due to his incredibly early adoption of the technology. For years Logan has sought out jobs that pay directly in Bitcoin as well as has invited Bitwage to handle his payroll accounts. Day to day transactions from groceries to car insurance are done in Bitcoin with all personal and professional projects stemming from the perspective of a Digital Pioneer.

GREY JABESI
Chief Visual Officer

Grey is responsible for directing and managing the brand visuals of HERC. Prior to joining HERC, Grey worked for various companies in South Africa as a CGI Specialist in the Film and Animation industry. He later started Imojimotion, a studio which provided 3D rendering for Architects; Visual Effects; Motion Graphics, as well as, Web Development services. Growing up in Malawi, Africa in his early years, he encountered real life problems which he later realized could be solved by the Blockchain technology. He has since decided to dedicate and focus his efforts on getting involved in meaningful projects within the Blockchain space.

MICHAEL NELSON
Chief Strategy Officer

Michael is an experienced entrepreneur and technologist with several successful exits from self-created technology businesses. Michael has decades of experience visioning, strategizing and implementing complex technology solutions for the government and private enterprises. He and Anthem have worked together for more than a decade, both having worked with precious metals dealer Goldmoney. He loves traveling, disruptive technologies, precious metals, and coin collecting. Michael has a Bachelor's Degree in Business and Managerial Economics from Norwich University (the Military College of Vermont), with a minor in Military Science (specializing in Information and Economic Warfare). He is a life member of a number of organizations including the ANA (American Numismatic Association) and NESA (National Eagle Scouts Association).

PAUL AUBERT
Senior Vice President & General Counsel

Paul has served as the sole Shareholder and General Counsel of a private law practice since June 2014. Prior to that, Paul served as General Counsel of Pernix Therapeutics Holdings, Inc., a Nasdaq-listed specialty pharmaceutical company. Before that, he was a Shareholder in the Corporate and Securities practice group at Winstead PC, a national law firm headquartered in Dallas, Texas, from 2007 to 2012. Paul also served as an attorney in the Corporate and Securities practice groups of several national and international law firms prior to joining Winstead in 2004, including at Andrews Kurth LLP, Weil, Gotshal & Manges LLP, and Jones Walker LLP. He holds a Juris Doctor and an M.B.A. from Tulane University in New Orleans, Louisiana and a B.A. in History from Louisiana State University - Baton Rouge.

ADVISORY BOARD

MICHAEL TERPIN
Founder and Chairman of BitAngels

Michael has spent his career innovating in public relations and across technology platforms after exiting multiple startups as a co-founder. As head of Transform Group, he has led PR for leading blockchain projects including Augur, Bancor, Dash, Ethereum, Factom, Golem, Gnosis, Lisk, Qtum, SALT Lending and WAX. Michael also runs CoinAgenda, the leading conference series in Las Vegas connecting mainstream investors with blockchain and cryptocurrency investments

BILL BARHYDT
Founder and Chief Executive Officer of Abra

Bill's passion is information technology and how it can be used to improve people's lives. Prior to Abra, he co-founded Boom Financial, where he also serves as Chairman. He gave the first TED talk on Bitcoin in 2012, and serves as an advisor and mentor to Boost.VC, a Bitcoin-focused incubator fund. Bill won the Technology Pioneer Award from the World Economic Forum in 2000 for his work at WebSentric, the first online meeting service that required no software install, and has consulted to federal and international regulators on the impact of digital currencies and decentralized transaction systems. In addition to co-founding and advising multiple start-ups, including m-Via, Sennari, Plaxo and KnowNow, Bill worked for Goldman Sachs, NASA and the CIA.

STEVEN DAKH

Founder of Rubix Consulting and Co-Founder and Former CTO of Jaxx Steve's experience in the blockchain software development industry spans half a decade with his development and co-founding of Bitcoin wallet Kryptokit in December 2013, now known as Jaxx wallet. Steve is a founding member of Ethereum, which launched in January 2014. Steve went on to build the Rush Wallet in 2014. Steve joined Crypto Consortium (C4) advisory board in 2014 as well. Steve is a cofounder of non-profit Unsung that distributes leftover food to the hungry in late 2015 and launched in 2016. Steve began development of Smartwallet multi-currency app in mid 2017 with plans to release later in 2018. Steve is also an advisor for Aeternity, PO.ET, Polymath, U.CASH, AnthemGold, and Academy school of Blockchain (all in 2017), and Theta (in 2018).

JOBY WEEKS
Chief Marketer for BitClub Mining

As the Prime Minister of Atlantis and Founding Father of Liberland Joby Weeks has found himself in bitcoin since it began as well as has worked in digital currencies since before 2009. Finding himself at the helm of Liberty Dollar his project minted more than $100mm worth of gold rounds. Joby is known to be a defender of personal rights and the protector of peace across nations.

ANDREW YASCHUK
Vice President, Product Development for Factom Inc

Andrew has been building software since the late 90's. Andrew has helped build four companies; two have been sold, and the other two are still in operation. He is also a trusted advisor in the healthcare and block-chain community. He has acted as an adviser for Factom, Storj, and HealthNautica. Andrew also supported Bitcoin mining companies, in the early days, with ASIC mining hardware. He is active in his community and has served as a Healthcare Judge for the Dupage County Election Commission.

DOMINIK ZYNIS WINGS
Co-founder and Head of Communications at WINGS Foundation

Dominik is the former Head of Communications at Mastercoin (Omni) Foundation. He also serves as an advisor at DomRaider and MedicalChain.

JEFF RAMSON
Founder and Chief Executive Officer of PCG Advisory Group

Jeff Ramson is the Chief Executive Officer of PCG Advisory Group which he founded in 2008. He is well regarded as a business entrepreneur and innovator, with a proven track record of more than 25 years' experience on Wall Street, raising capital and providing strategic guidance for emerging public and private companies in various stages of development. Jeff's passion and understanding of transformative technologies and how they affect current and future business trends has informed his whole career. He is known as an innovator in the intelligent use of social media to raise awareness in the investment community and represented the first Reg A+ offering listed on the NYSE. He has been a student of, and an early participant in, the emerging blockchain and cryptocurrency sector for several years. Most recently, he established Proactive Capital Partners, LLC, a private investment firm focused on capital appreciation through investment in next generation technology opportunities. Jeff is a director of EV Blockchain Corp. and an advisor to CG Blockchain.

BOARD OF DIRECTORS

CYNTHIA BLANCHARD and ANTHEM BLANCHARD - LISTED ABOVE

PETER BUCKLEY

Peter Buckley is a financial industry veteran focusing on capital markets, trading and financial technologies. Peter was an early-stage investor and Board Member in BATS Trading. He served as the Head of New Business for Brokertec; Managing Director and Head of N.A. Clearing and Professional Trading Groups at Newedge; and oversaw new business, strategy and investment opportunities at Tower Research LLC. In 2006, Peter founded Tower's London aliate and served as Spire Europe's CEO, expanding their footprint into emerging markets. Peter was selected by the CFTC to participate on the Technology Subcommittee on Automated and High Frequency Trading (TAC) in Washington DC. He is a graduate of Lehigh University and the Lawrenceville School and has consulted for Delta Strategy Group. Most recently, Peter invested in and has been advising Funding University LLC, a P2P student loan project financed by Jeff Bezos' Amazon Ventures.

AnthemGold (AGLD)

A CASE STUDY FOR THE HERCULES PLATFORM

AnthemGold is developing the AGLD, a token providing access to the company's gold-backed cryptocurrency. Hercules provides a solution to the AGLD problem of inconsistent and nonimmutable proof of the gold's purity, weight, existence, and location.

Background of the precious metals industry

The precious metals industry has a standard of transparency and auditing (Proof of Verification) of the underlying assets that must be met for clients to use any vendor. Scientifically proven methods are used at each stage in the chain of custody to ensure that the purity and weight of the precious metals that are used by a gold bullion manufacturer are the same as the purity and weight of the bar when received by the consumer. The information gathered in these tests needs to be readily available to any clients who wish to validate the chain of custody their bar has gone through.

AGLD

An AGLD is simply a unit of cryptocurrency that will be represented by one gram of pure gold. The grams will be stored in the form of one kilogram gold bars purchased from certified manufacturers and securely shipped to a private vault in Texas (referred to as the "bunker") managed by third party custodian. When received in the bunker, the bars will be tested and documented by a certified bunker custodian before being added to the vault. These bars will be regularly audited while they are being vaulted.

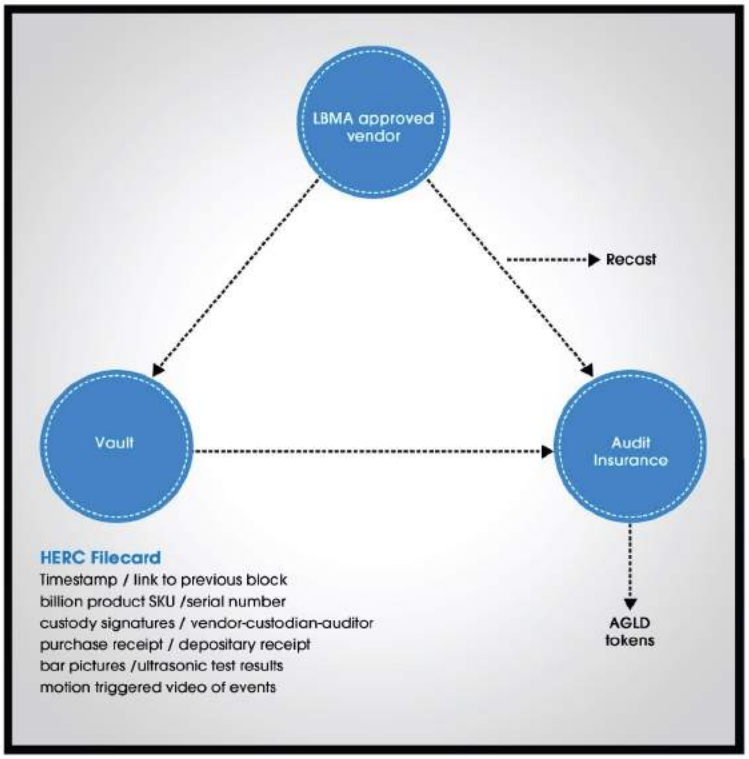
Hercules improves the AGLD Currency

When a bar is ordered from a manufacturer and/or dealer, information concerning the bar that is being shipped will be entered into and stored by the Hercules software. This information will include the dealer, the manufacturer, the gross weight, the results of a composition assay that validates the fineness of the gold bar, and the bar's serial number.

When a bar is received at the bunker, it will be tested by a sonic gauge that sends a sound frequency through the bar at multiple points and measures the time it takes for the wave to pass through the bar to confirm density. This returns storable readings that can be used to confirm the purity of the bar. Existing identifiers such as manufacturer, dealer (if separate from manufacturer), gross weight, assay (Fineness), and serial number will be taken from the bar for documentation. Lastly, images of the bar from all sides will be cataloged to document the visual state of the bar as it enters the vault. The individual performing the test and documentation will have a unique identifier that is recorded with the bar upon entering the vault. Thus, the Hercules software will store the following information:

- Results of sonic bar tests in 3 locations
- Manufacturer
- Supplier
- Gross Weight
- Assay (Fineness)
- Serial Number on bar
- Certified Individual's Identifier
- 3 Documenting Images
- Spectrometer Readings in a .CSV format

In addition to the information entered when bars are delivered to the vault, a high definition controllable video of the vault will be available in the Hercules Digital Viewer and will cost HERC tokens to view.



(Figures 5 and 6): An illustration of how AGLD works with HERC