



TESLA

Introducing a Smarter Crypto Payment Industry
Version 1.0 September 2020

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Important Information

This whitepaper provides general information and analyses about fintech solutions, payment gateways, and other related subjects. All information and additional contents provided in this whitepaper is not meant and should not be inferred as advice, nor is the information a substitute for additional professional expertise.

General Information

1. Tessler is a platform that uses blockchain technology to deliver its services in line with its vision and objective. The reader must comprehend that blockchain technology is an open-source protocol and is not an exclusive property of any person or business.
2. Tessler focuses on providing a blockchain ecosystem to improve payment transactions and data security, and there is a possibility that some of its features may be identical to others. This is because other project economies are also empowered — and limited — by innovations like Big Data technology and other complementary technologies.
3. This whitepaper is used to present Tessler to the community and to highlight all of its unique features. This document only serves the purpose of providing thorough information to the reader regarding Tessler.

This document introduces the basis, ecosystem, and token economy of Tesla and its underlying payment gateway and Big Data technology.

Tesla offers an innovative strategy to ease the intermediation process when performing financial transactions, garnering the payment gateway—its primary product—Big Data and blockchain technology. Otherwise stated, Tesla provides a B2B and B2C payment gateway that uses Big Data technology to treat all financial-related and users' data for optimizing sales volumes and increasing customer satisfaction by providing multiple insights on customer behavior and patterns.

Tesla's payment gateway (TeslaPay) can benefit users and merchants by offering an opportunity to treat Big Data by securing financial and personal data through the blockchain.

Tesla will also feature an ERC20 token built on top of the Ethereum blockchain. This will guarantee security and speed in transactions as well as provide a much broader exchange possibility system.

This token will be used to purchase services on the platform and subsequently pay for goods and services. It will be made available to trade and exchange with other cryptocurrencies on top of becoming an alternative payment method to fiat once listed.

In short, Tesla will offer a payment gateway that leverages Big Data and blockchain to treat and store transactional data efficiently and securely, establishing a smarter crypto payment industry.

Payment Gateways For Online Payment Processing

Payment gateways play a pivotal role in online payment ecosystems. Optimizing a payment gateway can prevent buyers from sending their entire payment processes on a downward spiral.

From a bird's-eye view, buyers send their money from a bank account to an online payment ecosystem, which then processes a transaction to a seller. A payment gateway works as a sub-middle class between the seller and the buyer by linking them through an application programming interface (API).¹

This API serves as a straightforward programming application. In other words, it works as a channel between a provider and a bank that decays a client's credit or debit card.² Eventually, a payment gateway is the last approach of the online sales process on a service or website.

The importance of a payment gateway can be compared to a credit card processor in a physical store. In this case, it works like a credit card processor in digital commerce, making payment gateways pivotal in online environments.

Payment gateways can also protect online businesses from fraud: PCI-compliant gateways and SSL certificates are essential in order to avoid security problems. The API can often determine the success of an online business.³

Securing a payment online commences when a customer places an order: clients need to submit personal and detailed information before checking out from the cart. In this sense, payment gateways represent a doorway to safe online transactions, mainly if technologies like the blockchain secure them.⁴

Safety might be at the core of any merchant's decision to consider a payment gateway service. The increasing trends of cyber vulnerability pose a significant concern for any business connected to e-commerce. The need to consider payment gateway services is to enhance the security of handling all online transactions.

Value of Big Data in Finance

The principal reason why Big Data has progressed rapidly over the last years is that it provides long-term enterprise value. This value can be obtained in terms of immediate social or monetary gain and in the form of strategic competitive advantage.

Moreover, due to its broad spectrum of applications, Big Data is embraced by all industries from healthcare, finance, or FnB, to the academic and non-profit sectors. There are numerous ways in which benefit can be obtained through Big Data and how enterprises can leverage to promote growth and become more efficient. Each of these drive to a digital transformation of organizations, thereby creating a long-term effect on how companies will have to be designed and operated.⁵

Finance and Big Data have converged in unimaginable ways. The banking and financial sector generate and manage an enormous volume of data. Providing solutions from situations wherein individuals receive cash from an ATM or submit physical forms at branches created a more convenient reality: interactions between customers and banks have mostly become online.

This new reality that performs an enormous amount of electronic records requires new storage and data processing techniques. Big Data emerges in modern society as it enhances financial services when storing data, obtaining business insights, and improving scalability.⁶

The innovative use of technology in the design and delivery of financial services and products commenced a market wherein financial and technology came together as Fintech.

Today's fintech applications include making online transactions and providing better investment management solutions, leveraging payment gateways and big data together.⁷

Billions of dollars are moving around global markets every hour, and analysts need to monitor all of these data precisely, securely, and fast; they have to understand market patterns and create efficient predictive strategies. This data value depends on how it is gathered, processed, stored, and analyzed.

In short, financial institutions still have to undergo a long process to become natives to the digital space. However, during the past few years, Big Data in finance has led to significant technological progress, enabling convenient and secure solutions for the industry.

As a result, big data analytics transformed not only singular business processes but the whole financial services sector.⁸

Blockchain and Big Data as Complementary Technologies

Blockchain and Big Data are amongst the most powerful emerging technologies during the past few years. Both are tipped to enhance several industries, thoroughly modifying the way businesses and enterprises are handled.

One might recognize these technologies as exclusive or mutually independent, with each forging unique paths and applied independently from one another.

However, these technologies uniquely complement each other: while data science centers on controlling data for proper administration, blockchain ensures data trust by storing it in a decentralized ledger.⁹

That said, there are rising expectations that blockchain will help enterprises finally get to grips with Big Data. Since securing and treating such giant amounts of data doesn't seem to be an easy task, blockchain can be interpreted as a pivotal solution to address many of Big Data analytics' challenges. The three pillars of distributed ledgers — decentralization, immutability, and integrity — would reinforce security of banking transactions to the maximum.¹⁰

In conclusion, real-time transfers are highly expensive, especially when it comes to the risk of double-spending fraud. A distributed ledger eliminates this risk while Big Data analyzes and identifies unsafe transactions. By combining Big Data and blockchain, banking institutions can detect fraud attempts in real-time.

Traditional Payment Gateways

PayPal is an international online payment system with more than 220 million active users. Founded in 1998 as Cofinity, PayPal offers individual users, businesses, partners, and developers a simple and safer way to send money, pay online, and get paid. Aside from payment processing services, it also offers easy cart integration, various customization options, online invoicing, and over-the-phone credit card payments. With just a single account, users can shop at millions of merchants around the world and pay for goods or services almost anywhere.

Stripe is a powerful payment platform built for digital businesses. Claiming to handle transactions worth billions of dollars annually, Stripe provides a wide range of flexible tools to customize payment processes. It has a plethora of APIs that allows the creation of customized subscription services, on-demand marketplaces, or crowdfunding platforms. Supporting hundreds of currencies, it also integrates mobile payments and a one-click checkout feature.

Decentralized Payment Gateways

HUPAYX is a blockchain-based global payment platform created to handle credible and convenient payments. It claims to be the world's first open payment system that supports cryptocurrencies for real-time payments. Significant economic players such as government organizations, finance companies, SMEs, and retailers can benefit from this platform.

MenaPay claims to be the first fully-decentralized payment platform that targets the Middle East and North Africa (MENA) region. Through blockchain, faster transactions with very low transaction fees can be conducted. Aiming to be more secure than any traditional payment gateway, it intends to be unaffected by the price volatility and is compliant with Islamic finance requirements. It is expected to help the digital transformation of the region.

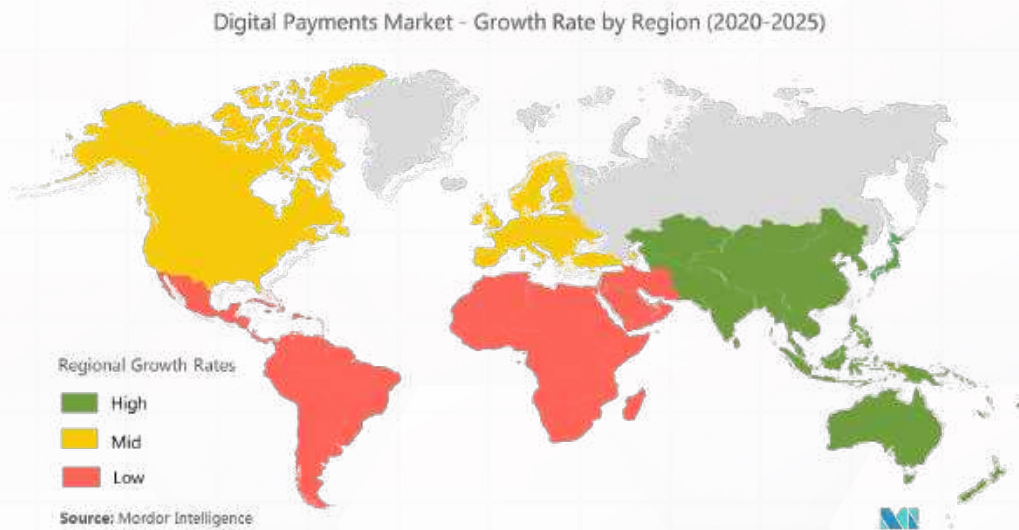
BitPay is a pioneer in blockchain payment technology. Founded in 2011, it has built powerful and enterprise-grade tools for crypto acceptance and spending. Seeing the potential of Bitcoin to revolutionize the financial industry, BitPay aims to make payments faster, more secure, and less expensive on a global scale. Targeting both businesses and individuals, it offers a card and a wallet alongside online and in-store payments and billing.

Blockchain and Big Data

Constellation Network developed a software infrastructure tool that removes the financial and organizational cost of insecure data pipelines and bad data. Through blockchain, it provides a secure and tamper-proof audit trail that simultaneously validates data, preventing bad logic across automated systems. Focusing on cybersecurity for big data, it implements security and auditability for complex datasets without changing the existing IT infrastructure.

Omnilytics is a blockchain-based distributed data network that combines artificial intelligence (AI) and machine learning tools across various industries to process global aggregated datasets. This will enable the platform to provide a new way for aggregating, processing, and utilizing data that is not limited by industry-specific rules. These datasets will drive Omnilytics towards becoming the pillar of support for all industries that rely on data while providing users with access to data that they may require.

Growth of Digital Payments



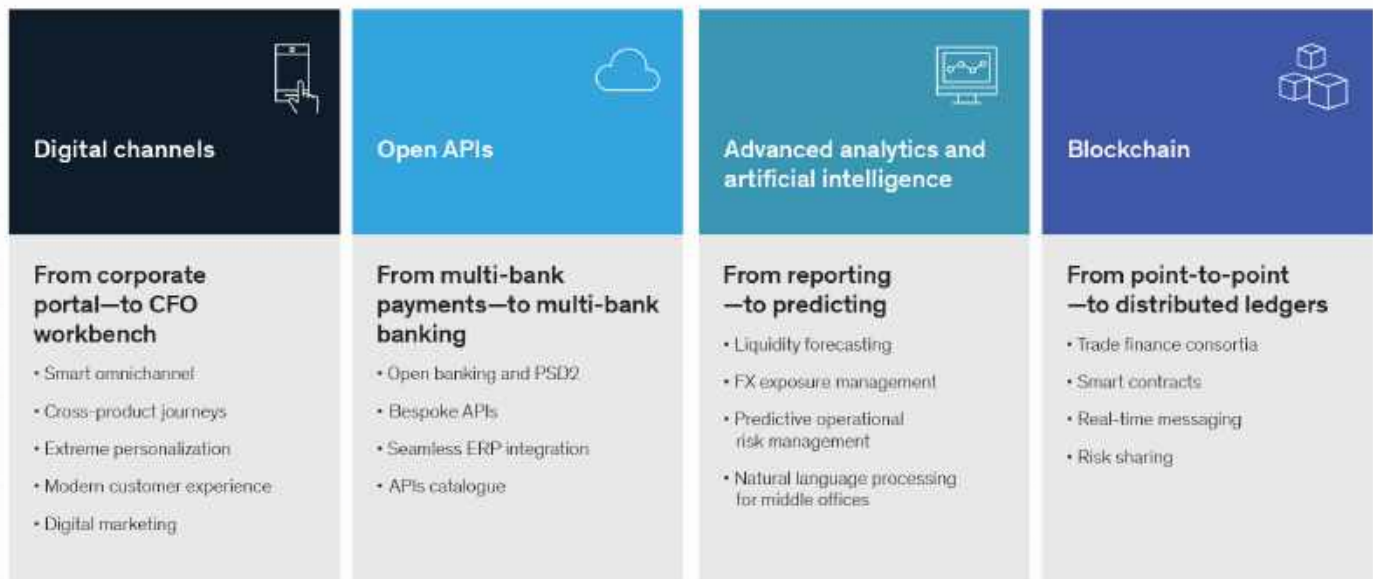
Source: Mordor Intelligence¹¹

Digital payments are led by consumers and merchants, wherein the payer and payee both use digital modes to send and receive money. Also referred to as electronic payment, no physical cash is involved in this process. As the demand for cashless payments driven by user convenience, favorable government policies, and evolving consumer behavior surges, the Digital Payments Market is expected to grow at a CAGR of 13.5% between 2020 to 2025.

In fact, the total transaction value in this market segment¹² alone is projected to reach over \$4 million in 2020. In the same year, over 3 million digital payers have been recorded, a +10.1% year-over-year (YoY) growth.

As the use of digital payment increases, the importance of keeping these online transactions secure is highlighted as the main concern. Despite the majority of people choosing to conduct online as well as mobile and contactless payments, still, some people are hesitant to use these modern payment methods due to security concerns such as payment and personal data hacking, manipulation, privacy, and usage.

Payment Technology and Innovation



Source: McKinsey & Company¹³

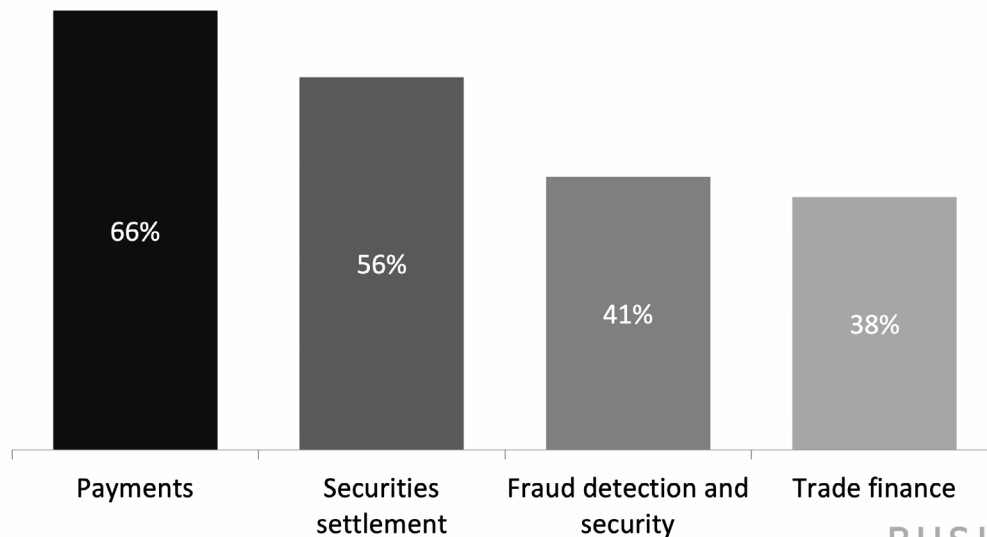
Technological innovation¹⁴ continuously transforms financial services and products globally — and at the top of this spectrum are payments. Within the past years, the introduction of new payment methods, platforms, and interfaces have been underway.

Technology is driving disruption on several fronts as developments accelerate across several dimensions to redefine global transaction banking (GTB) client experiences. Demand for digital channels, open APIs, advanced analytics, and the application of the blockchain's fundamental strengths have altered the landscape.

Despite this, major shortcomings when it comes to payments are prevalent: accessibility and cross-border transactions. Banks and merchants must embrace these multifaceted challenges to deliver new customer experiences.

Primary Benefits Of Blockchain According To FIs Exploring Or Using The Tech

Q: What are the top two use cases of blockchain for your bank? Choose your top two.



Note: Respondents are representatives of US banks with assets of over \$100 billion that are evaluating, piloting, or implementing blockchain.

Source: UBS Evidence Lab, 2019, n=40

BUSINESS
INSIDER
INTELLIGENCE

Source: Business Insider Intelligence¹⁵

Significantly, there are 1.7 billion adults globally who are tied to cash as their only means of payment, as they do not have any registered bank account. In addition, cross-border payments remain slow and expensive, especially retail payments such as remittances.

These shortcomings particularly affect the emerging market and developing economies (EMDEs), where remittances account for a substantial proportion of their gross domestic product (GDP).

As a response, financial institutions (FIs) are exploring the use of blockchain to improve their payment processing, securities settlement, fraud detection and security, and trade finance. With blockchain's immutability, transparency, scalability, and efficiency, these use cases can be handled seamlessly for increased customer satisfaction.

Big Data in Business



Source: IDC¹⁶

In a digital-powered economy, those with the right form of data can successfully navigate the market, make future predictions, and adjust their business to fit market trends. Unfortunately, most of the data we generate today is unstructured as it comes in different formats and sizes. Hence, it is difficult and costly to manage and analyze, which explains why it is a big problem for most companies.

It has been estimated that in 2020, there will be around 40 trillion gigabytes of data (40 zettabytes) generated around the world. With this huge amount of data, the necessity for big data technologies and infrastructure comes into play.

By 2022, IDC expects worldwide the big data and business analytics (BDA) market revenue to be \$274.3 billion. The industries currently making the largest investments in big data and business analytics solutions are banking, discrete manufacturing, professional services, process manufacturing, and governments.

By definition, Big Data is any large amount of info assets that demand cost-effective and innovative forms of information processing that enable enhanced insights, decision making, and process automation. It is typically characterized¹⁷ based on its volume, velocity, veracity, and variety.

The Big Data market is quickly expanding because we have more information every passing day. For various commercial and economic participants, the ultimate goal is not about collecting as much data as possible, but about getting value from the data collected.

Data Intelligence in the Payments Industry



Source: Business Insider Intelligence¹⁸

The financial services market has experienced considerable change as technology and a shifting regulatory environment have acted as a catalyst for innovation. This makes it one of the most data-intensive sectors in the global economy.

Amid this change, the payment process remains the same. When a payment transaction is created, payment data is sent for authorization with the issuer, and a response is received via the sender's acquirer. This is true for any digital transaction, regardless of whether it's done from a mobile account, credit card, or other e-money platforms.

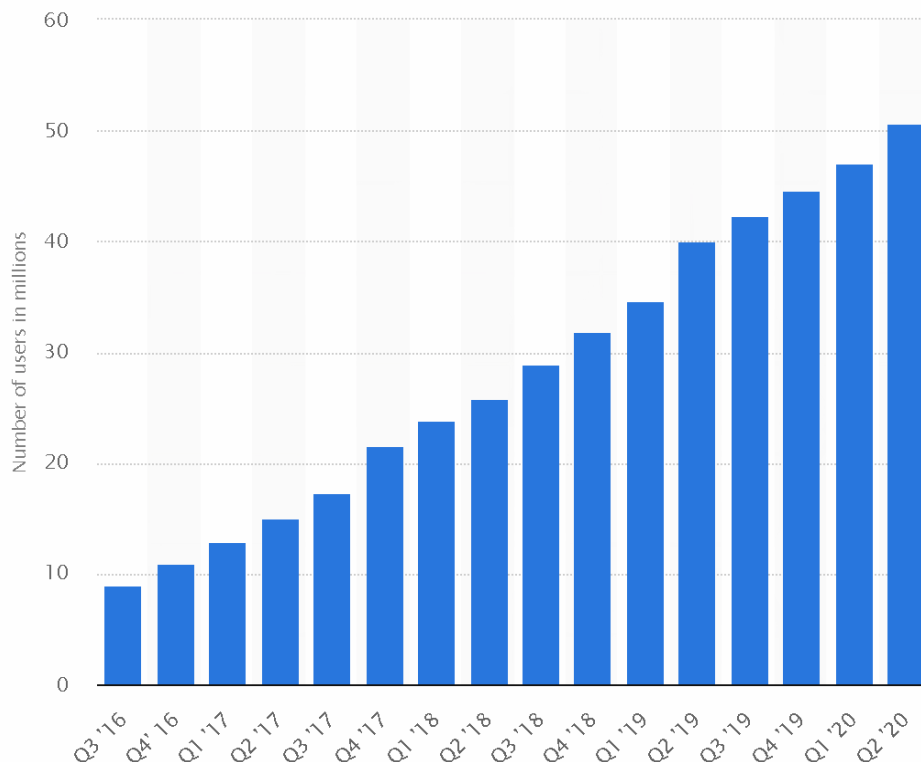
Due to this unchanged process, the impact of Big Data on the sector is hard to dismiss. Indeed, banks have enormous amounts of customer data such as ATM deposits/withdrawals, POS purchases, online payments, and KYC-intended data. This results in rich data sets, requiring solid data collection and processing technologies like data warehouses and business intelligence that are among the investment forerunners in Big Data technologies.

Payment data is considered to be the essential "truth data" in our digital world. This is where the path to purchase successfully ends with a decision to buy. With purpose-built applications of business intelligence – specifically, machine learning algorithms – merchants and ecosystem partners can benefit in the areas of customer retention, revenue growth, financial management, and operational improvements.

In leveraging payments data¹⁹ for actionable business insights and business benefits, creating flexible, scalable data models; distribution and utilization of data; and harnessing the power of innovative technologies are needed.

Normalizing data — the process of combining payment data into 'like-minded' profiles from different payment types and processing networks — is a crucial task as refining the data too much can make it become too generic and not insightful enough. On the contrary, the lack of refinement can make the data confusing and impossible to manage and utilize effectively. Using this data can enhance the overall customer service experience, holding tremendous power and competitive edge to businesses. It is worth the effort to look at the analytics to understand what they mean and make the best move possible to bring success.

Rise of Crypto Payments and Digital Wallets



Source: Statista²⁰

Cryptocurrency payments²¹ have the potential of creating a more borderless and globalized economy as well as bringing fast and secure financial services to the unbanked population.

With the overall crypto market cap²² being valued at \$300 billion in September 2020, Bitcoin continues to gain in terms of popularity and acceptance by individuals and businesses alike. Big companies such as AT&T, Overstock, Paypal, Subway, and Microsoft already accept bitcoin as payments²³ from their customers.

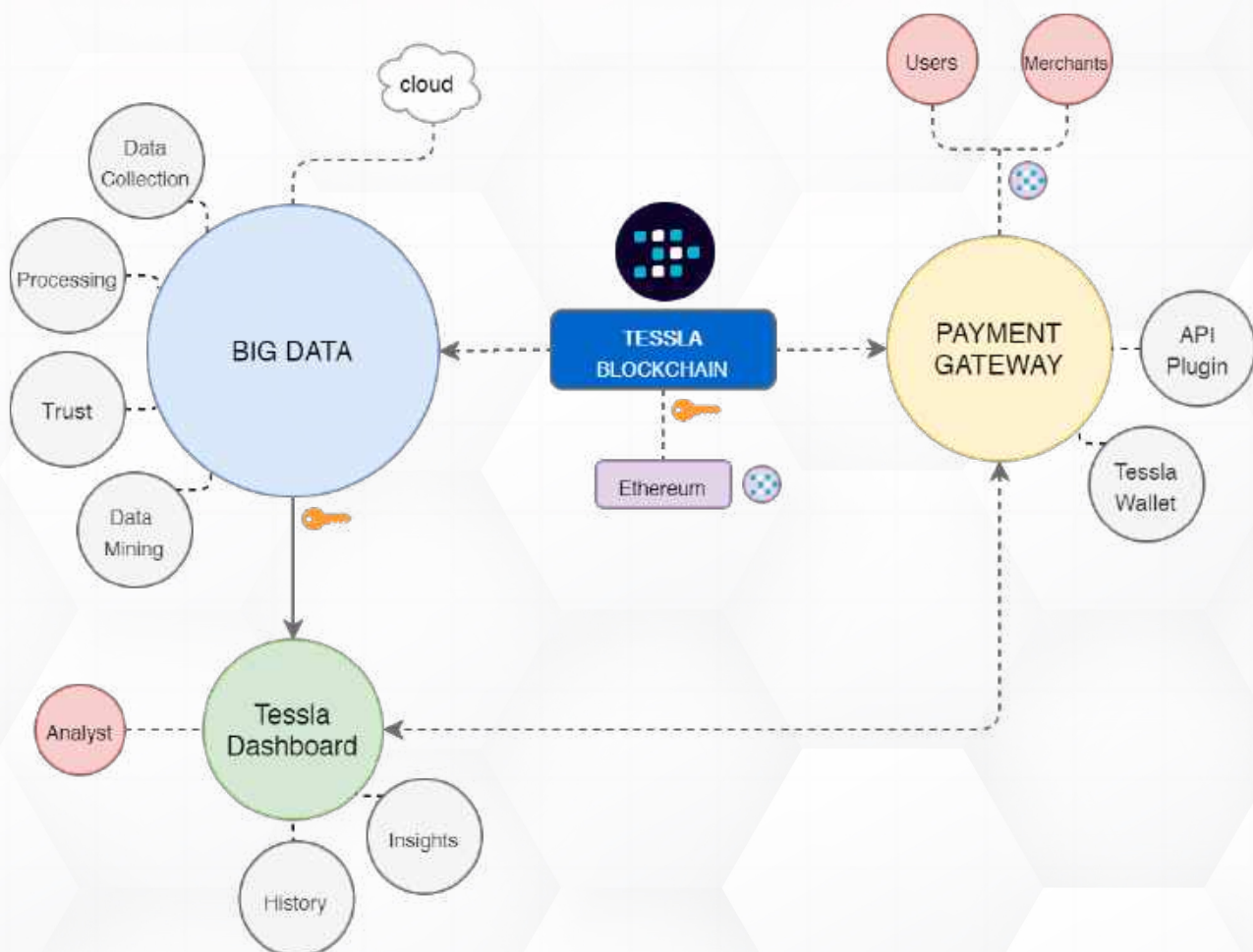
Cryptocurrency is also changing the way²⁴ that people utilize wallet applications with the number of blockchain wallet users reaching over 50 million at the end of June 2020.

Moreover, several existing blockchain-based payment processing services²⁵ are based on Bitcoin. This achieves the goal of accelerating payment and reducing transaction costs. The provider converts the payer's local currency into Bitcoin, then converts it into the receiver's local currency, seamlessly delivering international payments within one to three days. Business owners who are looking to innovate should embrace this development and redefine the way they conduct their payment offerings.

The Tesla ecosystem includes all the processes and services inherent to its main product—the Tesla Payment Gateway. The ecosystem will work and interoperate to optimize the API's efficiency through blockchain and Big Data technologies. In short, the Tesla ecosystem will be designed to benefit merchants, users, and researchers /analysts.

The diagram below serves as an illustration of the interactions within the Tesla ecosystem. The ecosystem flow comprises the following:

- (1) Digital Wallet;
- (2) Tesla Payment Gateway;
- (3) Tesla BD Network;
- (4) Tesla Dashboard



In the diagram above, we can perceive how the entire Tesla economy functions. Tesla's Payment Gateway (TeslaPay) is the main product which integrates the Tesla Wallet, API, and the Website Plugin to connect users and merchants.

TesslaPay is optimized through the usage of Big Data technology to collect, process, validate, mine, and enhance the information. Finally, analysts can find all the related data in the Tessla Dashboard in the form of insights. The security of the whole process is improved with the use of blockchain as its complementary technology.

Tessla Payment Gateway (TesslaPay)

As e-commerce traffic grows, and as more people buy with cryptocurrency, retailers shall accompany this phenomenon. It is essential to create a secure payment gateway to offer online payments and improve merchants, users, and researchers' overall experience.

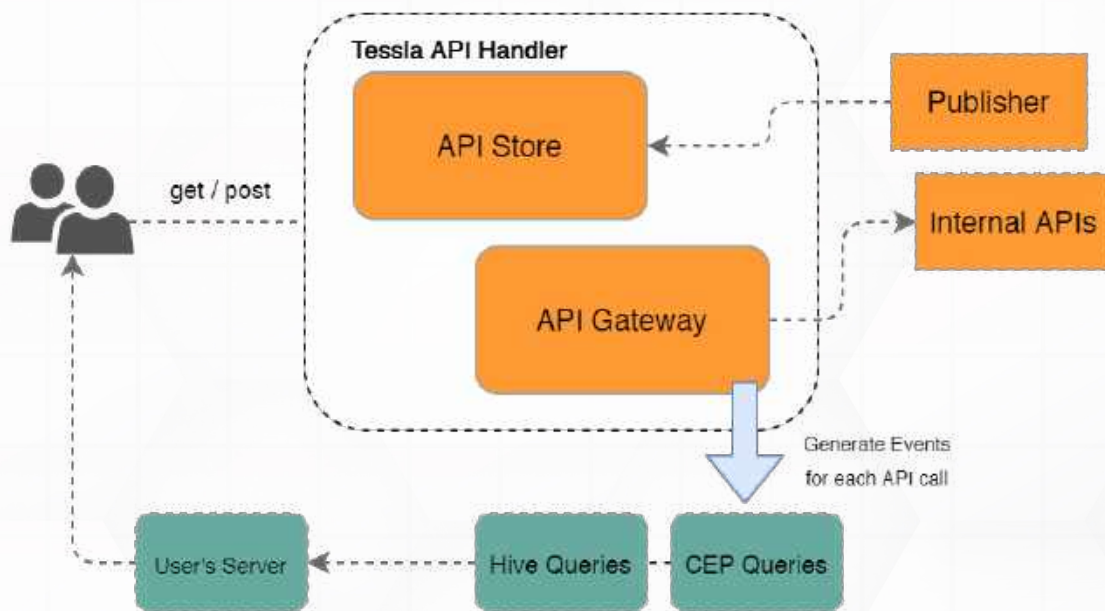
That said, the Tessla project strives to generate a unique distribution system that diffuses tokens in real-life and real-time. TesslaPay will perform decentralized online transactions with financial institutions. It grants several micropayment services such as credit cards, automatic response service (ARS), phone bills, and more.

Tessla users will be able to benefit from the following advantages:

- A secure network;
- A global payment system;
- An e-commerce payment platform;
- Big Data technology backed by blockchain; and,
- Low fees

TesslaPay will partner with e-commerce platforms, fintech firms, and other institutions to provide a rich experience to its users. Additionally, individuals' information will be protected and accompanied by a strict policy against fraudulent transactions.

Tessla API and Website Plugin



Tessla API

TesslaPay is the core feature of the Tessla ecosystem. The API is open to every online retailer and Tessla users. In short, Tessla provides existing retailers and their users with a payment gateway backed by Big Data analysis. It will also enable merchants and application developers with minimal blockchain and cryptocurrency knowledge to take advantage of the Tessla smart payment processor.

By activating Tessla API on applications, merchants will be able to facilitate fast and secure transactions, offering an improved service that leverages automatic data insights and anti-fraud protection layers.

On the other hand, users will benefit from an optimized service that combines financial and technology features using Big Data for predictions and blockchain for security.

(Please see the Tessla BD Network section for more detailed information on how we will use Big Data technology.)

Tessla will automatically convert **fiat into cryptocurrency** and vice versa, depending on the merchants' and users' needs. Through Big Data analytics, analysts will profit from real-time business insights.

TesslaPay will integrate a digital wallet, which can be used by merchants and users to facilitate their transactions. Merchants will receive the crypto payment within the **Tessla Wallet**, and the API will keep track of all transactions to help with every business' financial and accounting essentials.

Key Features:

- Fast and affordable transactions
- Automatic conversion (fiat to crypto/crypto to fiat)
- A facilitated mediation process
- End-to-end payment tracking (for users and merchants)
- Insights in real-time backed by Big Data
- Blockchain data protection

Tessla Website Plugin

The Tessla website plugin serves as an openly-accessed extension of the Tessla API for online retailers. Designed to be integrated into retail websites, this plugin will enhance the developers' experience by effortlessly integrating a versatile payment method on their website's checkout page, enabling them to earn both cryptocurrency and fiat.

The plugin will work similarly to the API and leverage from the aforementioned features; it is differently designed to fit website portals. It serves as a tool to integrate the Tessla API into the retailers' checkout pages.

Please note that the Tessla plugin is specially designed for applications that operate/manage a web browser version of their applications and app-independent online retailers.

Tessla Wallet

Tessla Wallet is an integral part of the Tessla smart payment processor. It serves as a back-to-back wallet, integrating merchant and user-related features. The application will be available for partner retailers as an easy-to-access platform to monitor crypto payments and as a stand-alone application for users.

Leveraging blockchain technology, Tessla Wallet will integrate multi-layer protection to enhance transparency and security against malware. It will use zero-knowledge protocol and two-factor authentication for higher security. In addition to the security measures, peer-to-peer (P2P) transactions will be facilitated through the blockchain.

This digital wallet can support multiple cryptocurrencies but is programmed to provide a better conversion rate for payments done using Tessla (TSLA). The wallet UI will be user-friendly and offer a live track option on payments for both merchants and users while providing instant exchange technology.

Tessla BD Network

Aside from the Tessla Payment Gateway, Tessla aims to offer big data analytics solutions to enterprises, benefiting not only entrepreneurs but also users, researchers, and other clients. Through the Tessla Big Data (BD) Network, customer data (transactional, browsing history, item preference, etc.) will be collected and organized into rich data sets with the integration of blockchain technology. With the use of blockchain technology, the security and privacy of all these data are ensured.

Data Analytics

Through the **TesslaDB** (Big Data warehouse), we can leverage a multitude of internal and external data sources, both structured and unstructured. From these data sets, data is analyzed and delivered to better understand customer behavior and stimulate ideas for new innovations and upgrades to be implemented for TesslaPay.

Blockchain-generated Big Data is secure as it cannot be forged or changed due to the network's decentralized architecture. Moreover, blockchain-based Big Data is crucial as it is structured, abundant, and complete, making it a perfect source in creating further research analysis and business insights.

There's no single technology that encompasses big data analytics as a whole. Considering that, Tessla BD Network implements various advanced analytics that can be applied to big data. This can help in getting the most value from the acquired information.

Machine Learning. This is a specific subset of AI that makes it possible to quickly and automatically produce scalable models that can analyze bigger and more complex data and deliver faster and more accurate results – even on a very large scale.

Data management. Before the actual analysis process, data must be well-governed and organized to ensure that it maintains to be of high quality. With data constantly flowing in and out of the TesslaPay system, it is important to establish simple yet robust processes to build and maintain standards for data security, privacy, quality, and acquisition.

This can be done through the following blockchain-data generated layers:

Data collection (the data source layer): raw data scraping from various sources

Data storage (the data storage layer): storing/staging data for further processing

Data manipulation (the data processing layer): prepare to perform data analysis

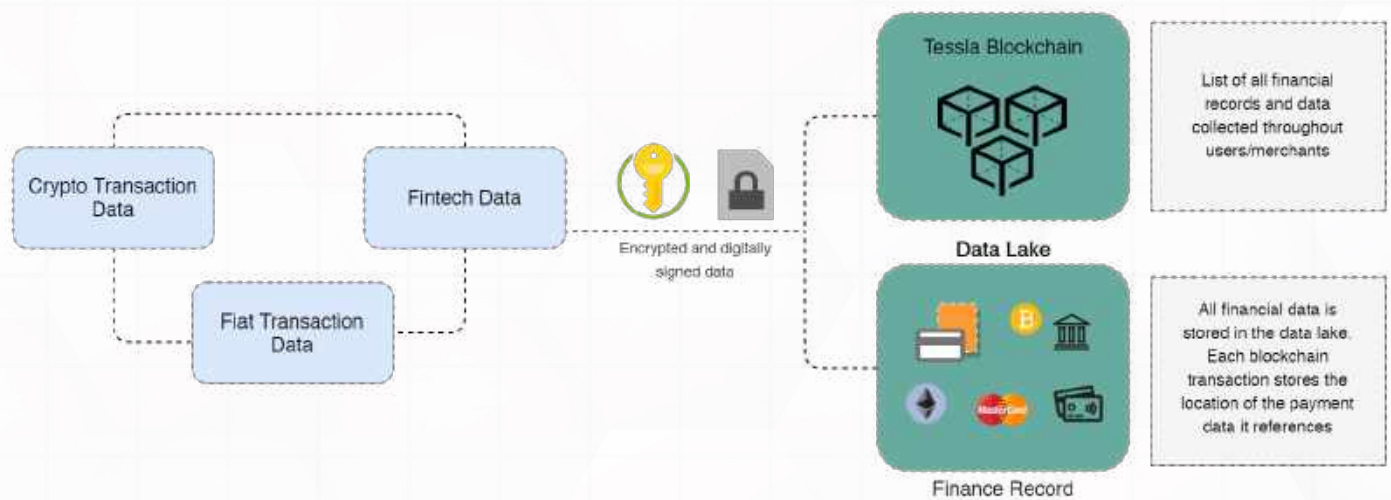
Hadoop. This charge-free and open-source software framework can store large amounts of data and can operate seamlessly across commodity hardware. Its distributed computing model is one of the key technologies that we are using to handle large data volumes and varieties and process the massive data faster than the average.

Predictive analytics. This technology uses data, statistical algorithms, and machine-learning techniques to identify the likelihood of future outcomes based on historical data. With this, the Tessler BD Network can get the best assessment to help our partner merchants make the most ideal business decision. Some of the applications for this technology are the following:

Cyber (identity) fraud detection and prevention: assess the risk of identity fraud and determine whether extra security measures like additional authentication techniques or restriction of access are required

TesslerPay fraud detection: analyze the transaction patterns like location, timing, amount, and merchants used to identify fraudulent transactions

Legal Claim Management: can help avoid, prepare for, and react to legal matters involving large amounts of data concerning collected and analyzed information



In the diagram above, the TeslaDB data that will be processed are initially presented. These are categorized into three, namely crypto transactions, fiat transactions, and fintech data, and are encrypted and digitally-signed to be stored on the Tesla blockchain. Each blockchain transaction is stored and turns into a finance record within the Tesla blockchain.

Crypto and fiat transaction data are payment data exchanged between buyer and merchant, while fintech data involves the data inputs required from the user by the merchant (registration form, purchase order, location, etc.).

Making use of our current technology stack TeslaDB, a hybrid data warehouse architecture is developed wherein the structured data is still using the conventional database warehouse (DWH) and the unstructured data takes a more modern operational data lake (ODL) approach. Our Big Data technologies work simultaneously with the Tesla blockchain to aggregate and analyze data from both sources. Without any intermediaries and with the assurance of validation from nodes which are part of the network, all data are confirmed to be factual and authentic.

Our big data analytics technology is exclusively designed for TeslaPay partners and merchants, end-users, credited researchers, external clients, and institutional investors. With this data, we aim to continuously improve TeslaPay's products and services — API, website plugin, wallet, and dashboard.

Tessla BD Network

Tessla aims to promote trust and transparency between customers and merchants. By bringing about smoother transactions and a better online experience for both buyers and sellers, the TesslaPay system will leverage Ethereum's smart-contract functionality to create a universal and decentralized trust and reputation system.

This will give each party more information when they conduct transactions, as well as help in reducing fraud and make it easier to resolve any future conflicts. On top of this, TesslaPay will have a seamlessly integrated payment gateway that takes advantage of the developments within the latest blockchain and big data technologies.

In line with this, all information gathered from reviews and ratings from users will be stored within TesslaDB. Default trust ratings will be set up for both merchants and users that are using the TesslaPay ecosystem for the first time. Depending on the reviews given by the user and the purchase history recorded by the merchant, the trust and reputation between each other will be established. These data cannot be compromised in any way as the Tessla blockchain makes it impossible to tamper any pieces of data.

This information can be analyzed later on through the Tessla BD Network to deliver insightful remarks on how to improve customer experience and retention, as well as how TesslaPay can improve its services as a payment gateway provider.

Data Mining

Tessla BD Network is also focused on providing research analysts with significant market research materials that can improve transaction services and propose upgrades to the TesslaPay services.

Through data mining technology, Tessla BD Network can examine large amounts of data to discover data patterns that can be used for further analysis.

This can help in answering complex business questions that can enhance the business model of Tessler as well as the partner companies. With our own data mining mechanism, all the chaotic and repetitive noise in data is filtered, pinpointing what's relevant and using that information to assess likely outcomes to accelerate informed decisions that could impact the success of the TesslerPay product.

Here are two other use cases of data mining:

Customer Segmentation. Data mining increases market effectiveness as it aids in grouping the customers into a distinct segment and tailoring the needs accordingly. Finding a segment of customers could allow TesslerPay and the partner business to offer them special offers and enhance satisfaction.

Research Analysis. Data mining is helpful in the data cleaning and data pre-processing involved in the integration of mainly TesslerDB or other research databases. Researchers can find and compare data from the database that might bring modifications to a research, making it more informative and accurate.

Tessler Dashboard

The TesslerPay platform offers a comprehensive payment gateway solution to be used in the online transactions of people in all parts of the world. Its blockchain-based payment infrastructure, API, and website plugin allow partner companies to streamline payment transactions using cryptocurrencies without worrying about fraud, privacy concerns, information inaccuracy, and duplication.

Through the specially-designed Tessler Dashboard, the merchant owner can keep track of business insights and transaction history, among other data that are correlated with its consumers' usage of TesslerPay.

Business Insights

Big data analytics help identify opportunities to improve efficiency, productivity, and potential business opportunities. Through the Tesla BD Network, businesses can access business insights to drive better decision-making and make their business operations more productive. Hence, they can experience higher returns than businesses that don't have access to these data analytics.

In the Tesla Dashboard, these business insights can be shown to the merchant owner. Upon integrating TeslaPay to their platform, once a sufficient amount of data from users have been collected, the information from TeslaDB will start to be processed and analyzed later on. Merchant owners can show analytics on their Dashboard account to monitor the transaction performance and purchase history of consumers.

Premium business insights covering a more in-depth analysis from TeslaDB's information can be obtained by paying TSLA tokens. Once the premium version is purchased, merchant owners can have access to advanced insights and analysis of their business.

Insights from data analytics can help businesses:

- Meet consumer demands;
- Improve service level performance;
- Improve order fulfillment;
- Acknowledge complaints and refund requests to improve products and services; and
- Scale, decrease, and manage operational costs

Transaction History

TeslaPay's system will save every transaction on the Tesla blockchain, along with all of the important data. The following are some of the information that will be available:

- Number of transactions, transaction volume, and Transaction ID, customer ID, Payment Status, etc. processed over TeslaPay
- Business insights and detailed reports
- Payment history, payment frequency, and data showing customers' shopping tendencies

The Tesla ecosystem will be run by its native token Tesla (TSLA). Merchants who use TSLA tokens into their apps and/or online retail portals will be able to profit the most out of the TeslaPay (API and Plugin).

Tesla has created 11 billion TSLA tokens in total supply, all of which are premixed in a single genesis block. TSLA will be made accessible to users via token listing on several exchange platforms.

TSLA tokens can be used to purchase Tesla's services within its ecosystem and as a means of reducing fees regarding crypto transactions within our peers' platforms.

Since the Tesla token will be open for buying and trading on exchanges, many cryptocurrency users will be able to trade it and make profits. This will also preserve and enhance the market value of TSLA.

Tesla's user base is expected to rise as merchants integrate the API and/or plugin into their retailers' accounts for crypto adoption. Also, the more users download the Tesla Wallet, utilize TeslaPay, purchase TeslaDB's insights, and understand its services' benefits, the more the value of the TSLA token increases.

Tesla Token

Tesla (TSLA) is the native utility token of the Tesla economy. It will serve as a means of exchange for all the transactions within the platform while performing as the projected fuel.

In short, within the Tesla platform, users will find a payment gateway, BD network, and dashboard — with all its subordinate services — and must use TSLA to purchase any of those services.

TSLA is an ERC20 compliant token, meaning that Tesla follows the ERC20 standard on the Ethereum platform. Beyond all the security features associated with the Ethereum blockchain, this token standard has a broader compatibility with other cryptocurrencies since many ERC20-compliant tokens are on the top of the crypto market.

All the ERC20 tokens must have the following method-related functions. Texts placed within the brackets define what each function does:

1. `totalSupply()` public view returns (uint256 totalSupply) [Get the total token supply]
 2. `balanceOf(address _owner)` public view returns (uint256 balance)
[Get the account balance of another account with address _owner]
 3. `transfer(address _to, uint256 _value)` public returns (bool success)
[Send _value amount of tokens to address _to]
 4. `transferFrom(address _from, address _to, uint256 _value)` public returns (bool success)
[Send _value amount of tokens from address _from to address _to]
 5. `approve(address _spender, uint256 _value)` public returns (bool success) [Allow _spender to withdraw from your account, multiple times, up to the _value amount.
If this function is called again it overwrites the current allowance with _value]
 6. `allowance(address _owner, address _spender)` public view returns (uint256 remaining)
[Returns the amount which _spender is still allowed to withdraw from _owner]
-
- ```
function Transfer(address indexed from, address indexed to, uint256 value);
function Burn(address indexed from, uint256 value);
function _approve(address owner, address _spender, uint256 amount)
function burnFrom(address Account, uint256 _value) public returns (bool success)
function transferFrom(address _from, address _to, uint256 _value) public returns (bool success)
function approve(address _spender, uint256 _value)
function approveAndCall(address _spender, uint256 _value, bytes memory _extraData)
function allowance(address _owner, address _spender)
function UserLock(address Account, bool mode)
function LockTokens(address Account, uint256 amount)
function UnLockTokens(address Account)
```

## **Tessla Token Usage**

TSLA tokens have a number of functions within the system. These show the versatility and potential of Tessla in facilitating peer-to-peer payments within its various services.

TSLA tokens can be used for independent payments on crypto-compliant places within merchants' portals—using the TesslaPay (API or Plugin)—to purchase insights within TesslaDB's, and as a means of exchange.

Purchase-related transactions are generated within a block; this is processed and validated by the Tessla network via cryptographic hashing. In addition, blockchain and big data technologies will help to protect transaction data to efficiently and securely store users' information in a distributed database.

All blockchain-related processes will be made possible through the Ethereum platform.

## **Facilitated Purchases**

Merchants can use TSLA as a means of payment for their purchases with external retailers. This becomes more viable when TSLA has been listed on cryptocurrency exchanges.

## **Lower Transaction Fees**

TSLA will be charging its users with a minimum fee for completing transactions. Compared to other cryptocurrencies, TSLA provides lower fees.

## **Trading in Exchanges**

Tessla will be listed on cryptocurrency exchanges to provide global access to all crypto users. This will gradually increase in valuation as more merchants and cryptocurrency users utilize TSLA on their payments.

## **Conversion to Crypto/Fiat Currencies**

Upon purchasing a product or service, users can define what's more convenient for them, be it cryptocurrency or fiat. Tessla will automatically convert the said asset into the TSLA token through its payment gateway. The conversion rate will depend on the real-time price of each asset involved in the transaction provided by big data technology.

## **Purchase of Premium Services**

Merchants who want to make the most of TesslaPay and TesslaDB's can utilize TSLA token to purchase the premium service on our portal. They will benefit from full access to personalized information based on the behavior of their users. Merchants can have access to advanced insights and business analysis.

## **Tessla Architecture**

Tessla works on top of the Ethereum blockchain for smart contracts and cryptocurrency transactions. If the need for its own blockchain arises, Tessla will migrate from Ethereum to its mainnet and perform a token swap.

As said in the previous parts of this whitepaper, Tessla features its own crypto payment gateway—API and plugin—which any company can integrate into their website or app to enable transactions via cryptocurrency. The app source code will be made available for public viewing once this has been finalized. It also has a stand-alone which functions as a payment facilitator and tracker. TesslaPay and Tessla's wallet will be backed by Big Data technology to provide up-to-date insights and store those in the blockchain.



## **Consensus Protocol**

Tessla will make use of the Proof-of-Work (PoW) protocol algorithm as its consensus algorithm. The Tesla team has decided to stick with PoW despite the availability of other widely accepted alternatives such as Proof-of-Stake (PoS) and Delegated Proof-of-Stake (DPoS) considering the following advantages.

### **PoW Consensus Protocol Advantages**

Proof-of-Work (PoW) is considered one of the most secure blockchain protocols as of now; it is considerably more challenging to be hijacked using a 51% attack and other average hacking techniques.

Any hacker who plans to hijack the Tesla system will have to have a more powerful computer system than 51% of the entire network and expend an enormous amount of energy, except unless the profit is significantly higher than the cost.

And unless the gain is significantly higher than the cost, then the hacker would have wasted time and computing resources.

## 2020

### Q4 Tesla Official Launching

- Tesla launches its official website and social media channels.
- Tesla (TSLA) tokens are deployed on Ethereum.
- TeslaPay's initial round of development begins.

## 2021

### Q1 TSLA Listing

- Tesla (TSLA) starts being listed on major crypto exchanges.
- TeslaPay's alpha version is released for testing.

### Q2 TeslaPay API and Plugin Integration

- TeslaPay's beta version is made available for fintech companies.
- Tesla BD Network kickstarts its data analytics solutions.

### Q3 Tesla Partnerships and Expansion

- TeslaPay is fully implemented in over 100 existing online platforms.
- TSLA gets listed in more than 15 crypto exchanges.
- TeslaDB becomes widely-recognized as a payments industry innovation.

### Q4 Prominence of TeslaPay and BD Network

- TSLA gets ranked among the top 100 cryptocurrencies in the market.
- More researchers and fintech companies collaborate with Tesla products and services.

Our users' privacy is important to us. Tesla (TSLA) values your privacy concerning any data we may collect from you across our website, API, wallet, and other sites we own and/or operate.

We merely ask for the necessary information as we need to provide the best services to you. We only collect data by legal means, with your knowledge and permission. We will further clarify why we are collecting this information and how it will be used by Tesla.

We only maintain the collected information for as long as it is needed to deliver your requested service. Be assured that all the data and information we collect will be secured within legally acceptable grounds to prevent loss and theft, unauthorized access, and disclosure.

We do not distribute or share any confidential information in public or with external parties, except if compelled to do so by the law.

The Tesla website may eventually be connected to external sites that are not operated by us. Please be informed that we have no authority over these sites' content and practices, and we cannot be held accountable or for their particular privacy policies.

You are free to decline to share your personal information; bear in mind that we may refrain from granting you some of your desired services.

The continued usage of the Tesla website will be regarded as an acceptance of our practices around privacy and data. If you have any doubts on how we manage our users' private and personal information, please contact us.

In order to respect the privacy of those who are staying in countries that are under the European Economic Area (EEA), please be informed that we created our policy agreeing with the provisions in the General Data Protection Regulation (GDPR).



## **1. Data Collection**

We collect some critical information when you visit our website or use our platform. We may collect your internet protocol (IP) address—used by your computer or mobile device to connect to the internet—operating system—browser type, and version, duration. We can also collect the visit time to the site, date and time of the visit, time zone setting, links you click on, and information you input on our forms.

We will also ask for your permission for the cookies on our website upon visiting.

## **2. Utilization of Data**

The information we collect will importantly provide us timely and appropriate support to prevent fraud and any other illegal activities from happening on our website.

## **3. Data Sharing**

We will never use your information to make a profit in any way by sharing it with third-party organizations and companies affiliated with Tesla.

We would only disclose your data in cases of court orders or other legal requests made by government officials, law enforcement officers, legal courts, or other officials.

## **4. Data Security**

For your security, do not disclose any personal information on platforms and online applications which are not managed and owned by Tesla. This is to prevent heinous and illegal activities on your account.

## **5. General Data Protection Regulation**

In case your residency is within the European Economic Area (EEA), we value your right for the following, as designated by the General Data Protection Regulation:

- The right to be informed
- The right to access
- The right to rectification
- The right to be forgotten
- The right to restrict processing
- The right to data portability
- The right to object
- Rights concerning automated decision making and profiling

## **6. External Provider**

We may hire external providers in order to perform third-party services or assist us in optimizing our services. These third parties may have access to your data only to perform these tasks on behalf of Tesla and are restrained from disclosing or using it for any other purposes.

## **7. External Links**

Our website may contain links to other websites that are not operated by Tesla.

We firmly advise you to analyze all the sites you visit. We have no authority over and assume no accountability for any third-party sites or services' content, privacy policies, or practices.

## **9. Children's Data**

Our Service does not address persons who are under the age of 18.

## **10. Changes to Tesla Privacy Policy**

We may renew this policy occasionally. That said, we recommend you to visit this page periodically. Changes to this policy are effective immediately once posted and announced through official means such as the Tesla website, API, or wallet.

- 1.ChargeBee Blog. 2019. **Payment Gateway Providers 101 – Why and How They Matter in Online Payment Processing.**
- 2.Razer. 2017. **Why Payment Gateway is Doubtlessly Important for your Online Business?.**
- 3.Builderfly. 2019. **Browse by Category How Important is a Payment Gateway in Ecommerce?**
- 4.Newswire. 2020. **Payment Gateway 101: What It Is, How It Works, and Why It's Important**
- 5.Enterprise Big Data Framework. 2018. **Five ways to capture Value from Big Data.**
- 6.Acadgild. 2018. **Top 5 Advantages Of Big Data In Banking You Should Know**
- 7.Trellance. 2020. **Transactional Data: Big Data and the Rise of Payments**
- 8.Talend. 2020. **Big Data in Finance – Your Guide to Financial Data Analysis**
- 9.Towards Data Science. 2019. **How Blockchain Will Disrupt Data Science: 5 Blockchain Use Cases in Big Data**
- 10.Finextra. 2019. **Blockchain and Big Data: A great marriage**
- 11.Mordor Intelligence. 2019. **DIGITAL PAYMENTS MARKET - GROWTH, TRENDS, AND FORECASTS (2020 - 2025)**
- 12.Statista. 2020. **Digital Payments Worldwide**
- 13.BIS. 2020. **Innovations in payments**
- 14.McKinsey. 2019. **Global Payments Report 2019: Amid sustained growth, accelerating challenges demand bold actions**
- 15.Business Insider. **2019 BLOCKCHAIN IN BANKING: An inside look at four banks' early blockchain technology successes and failures**
- 16.IDC. 2019. **IDC Forecasts Revenues for Big Data and Business Analytics Solutions Will Reach \$189.1 Billion This Year with Double-Digit Annual Growth Through 2022**
- 17.Enterprise Big Data Framework. 2019. **The Four V's of Big Data**
- 18.Business Insider. 2019. **THE 2020 PAYMENTS ECOSYSTEM: The trends driving growth and shaping the future of the payments processing industry explained**
- 19.The Paypers. 2018. **The next wave: turning payment data into business intelligence gold**
- 20.Statista. 2020. **Number of Blockchain wallet users worldwide from 3rd quarter 2016 to 2nd quarter 2020**
- 21.Forbes. 2019. **The Rise Of Crypto As Payment Currency**
- 22.Tokenmarketcaps. 2020. **Top 100 Cryptocurrencies and Live Crypto Prices**
- 23.WRCBtv. 2020. **Who Accepts Bitcoin In 2020? 10 Major Companies**
- 24.Plug and Play. 2019. **Easier and Faster Payments with Blockchain**
- 25.American Express. 2017. **Coming in 2017: "Live" Blockchain Deployments Promise to Accelerate Payment Processing Services and Trade Finance**