FILLETX (YUM) INSPECTUS

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Management Introduction

Our Foundation

The App

Our App, Fillet for Chefs, is the best reviewed food business management application in the world according to Apple App Store reviews. These reviews are based on quality of user experience and number of application features.

Our App provides our users with fundamental technological infrastructure that enables them to analyze and make intelligent financial decisions about their business. Our technology simplifies and demystifies core tasks such as product pricing, inventory management, and ordering ingredients from suppliers.

Buyers (such as food businesses, commercial kitchens) are empowered to manage their kitchens with ease and efficiency: they can easily enter operational data and receive analytic insights from our interface; they are connected to a global market of food products, suppliers, and source data such as inventory price lists.
Sellers (such as suppliers, merchants) are equipped with tools to optimize their internal and external operations: they can standardize and streamline their ordering process; they can market their products online to a global audience; they outcompete other merchants who are not using our App or online ordering.

Our users have created a thriving ecosystem within our App: the pursuit of individual benefit organically contributes to gains for the whole community.

Current monetization model

Currently, our App is a SaaS with a monthly or yearly paid subscription option. Our SaaS revenue is derived from users purchasing subscriptions; our revenue increases as the number of paid users increases.

We will gradually shift our operations to a FSEM (free SaaS enabled marketplace) model. Once we shift to the FSEM model, we will no longer charge SaaS subscription fees. Instead, our revenue will be derived from a variety of sources as discussed in the FUTURE MONETIZATION MODEL section below. Shifting to the FSEM model will remove barriers to adoption for our SaaS and pave the way for us to be integrated into every food business in the world. This will increase our reach, our perspective, and our growth.

Imminent monetization model

Fillet Exchange

The Fillet EXCHANGE will build on our App’s user ecosystem and become an additional source of revenue. Some of this revenue will eventually be derived from EXCHANGE COMMISSIONS, which is a percentage of Exchange transaction amounts. There will be a range of Exchange Transaction Fees which will depend on various factors such as transaction type (for example, market maker and market taker transactions).

The Exchange has been launched as of Q4 2017.

Future monetization model

Fillet Marketplace

The Fillet MARKETPLACE will build more extensively on our App’s user ecosystem and become a key source of revenue. Part of this new revenue will be derived from MARKETPLACE COMMISSIONS on Marketplace transactions.

For instance, sellers on the Marketplace will pay Marketplace Commissions based on percentage of GMV. There will be a range of Marketplace Commissions charged which will depend on various factors such as the product category of the product being sold.

Moreover, revenue generated by our future Marketplace is correlated to its gross merchandise volume (GMV), which is the total dollar value of merchandise sold through the Marketplace over a certain time period. Increases in Marketplace GMV will generate increased Marketplace Commissions, which creates revenue growth.

Eventually, Marketplace transactions will only be settled using **YUM**. When YUM is used in all Marketplace transactions, Marketplace Commissions will increase. As Marketplace Commissions increase, our revenue will increase.

**Marketplace P4P marketing services**

Pay-for-performance (P4P) marketing services generates two streams of revenue. The first is generated when sellers bid on keywords that are shown to buyers when searching for products on our Marketplace. The second is generated when sellers pay us on a pay-per-click (PPC) basis when buyers respond.

Our platform will continuously monitor our users’ businesses and recommend them business optimization strategies. Every recommendation is aimed at maximizing and capitalizing on opportunities.

For instance, our recommendations will assist sellers with business promotions and advertising their product offerings to buyers.

More generally, examples of optimization strategies include suggestions to

- substitute one ingredient for another,
- introduce new ingredients or products,
- switch suppliers,
- modify the terms of agreement between suppliers and buyers in order to appeal to a particular buyer, and
- make adjustments that create holistic benefits for the user ecosystem.

As our Marketplace matures, our optimization strategies will become more sophisticated, and our recommendations will be even more effective at achieving our users’ goals. As our P4P marketing services evolve and develop, our revenue will increase.
Marketplace membership fees

Members of the Marketplace will pay Marketplace Membership Fees; this will be a source of revenue. There will be a range of Marketplace Membership Fees which will depend on various factors such as user type. Part of the revenue generated will be reinvested into further developing user experience. For example, Marketplace Membership Fees for sellers will go towards

- verification of the seller’s business,
- product audits,
- upgraded storefronts,
- advanced business analytics, and
- advanced reporting tools.

All of these features will enhance sellers’ ability to achieve their business goals.

OPERATIONS, GROWTH & DEVELOPMENT

User Engagement

Potential users will be attracted to the intuitive ease of our Marketplace functionalities. Users looking to buy and sell on our Marketplace will be especially attracted to our specialized buyer and seller functionalities.

Buyer Marketplace functionalities will include the following:

- obtaining and reading product catalogues and price lists;
- placing orders for products;
- monitoring each stage of transactions (checkpoints);
- monitoring multiple shipping processes;
- securing and settling payment; and
- escrow services.

Seller Marketplace functionalities will include several of the above functionalities as well as the following:

- easy accounts balancing and synchronization for transactions with buyers;
- streamlined ordering platform for meeting buyer demand; and
- communication services with buyers, existing and prospective.
GMV Transacted on our Marketplace

The GMV transacted on our Marketplace is driven by several factors, including:

- number of product and services purchased by buyers,
- number of product and services listed by sellers/suppliers,
- number of product categories available for listing/ordering,
- relevance of search results when users search for products or services,
- buyer engagement and activity on our Marketplace,
- seller engagement and activity on our Marketplace, and
- total amount of user traffic visiting our Marketplace.

Using a variety of resources — such as data analytics and user feedback — we will develop methods to stimulate growth in each of these factors.

Reinvestment & Product Development

We will reinvest in our own business to expand our capabilities and improve user experience. This encompasses continued development in our technology, our people, and our company infrastructure.

Product development includes employee salaries bonuses for employees working on the frontend and backend of our existing products, which includes our flagship iOS app, as well as our web and Android versions.

We will (re)invest in our employees as they are the backbone of our business. We will support the Ethereum community and its expansion. We will contribute to the progress and proliferation of blockchain technology.

All of these efforts will align to develop our brand even further.
BUSINESS & BUSINESS MODEL

OUR MISSION, VISION AND VALUES

Our mission is to automate and bring transparency to the food supply chain.

Our vision is to build the global operating system for food distribution. Our platform will have a realtime view inside every food business around the world, and autonomously manage the food supply chain at every level.

Our values inform how we recruit, evaluate, and compensate our people. Our values shape our organization from the inside outward, which will, in turn, shape how we are perceived by the world. These values are fundamental to the success of our enterprise:

- **Equality** – We are all equal and strive to treat everyone as equals, no matter what race, ethnicity, physical appearance, age, sex, sexual orientation, language, political and religious beliefs, or nationality.
- **Transparency** – We uphold transparency within our team and to the outside world. This is crucial to building trust amongst ourselves, our customers, and the global public.

- **Accountability** – We proudly take responsibility for our actions and for the actions taken by our platform.

- **Integrity** – We do not do anything today that we would not be proud of if newspapers were to write about it tomorrow.

- **Commitment** – We undertake all tasks with 100% effort; otherwise, we do not do it at all.

## OUR STRENGTHS

### Solid foundation

At our current stage, we already have a solid foundation to build upon:

- We have product-building expertise;
- Our CEO has a technical background and experience in building health and nutrition products that have been positively received;
- Our existing technology, platform, and products are trusted and proven;
- Our brand is trusted by a global network of more than 8,000 businesses; and
- Our current revenue stream can indefinitely sustain our operations.

We are well-positioned to build on this foundation and establish market dominance.

### Leadership in mobile applications

Our iOS app was featured on the Apple App Store and is rated 5 stars on the U.S. Apple App Store. We are the leading mobile and tablet solution for food business management for users all over the world. Our existing technology, platform, and products are constantly becoming more sophisticated — this further grows our brand’s positive reputation.
Thriving ecosystem, powerful network effects

Thousands of food businesses around the world trust our products to manage their operations — we deeply value this trust. These businesses are invested in our business’ success. On their own initiative, our users share their positive experiences, promoting our products and our network to others. Our users share our belief that the more business they bring us, the stronger our network will become.

We will maintain our healthy ecosystem with a two-pronged approach: vigilantly monitoring our network; and actively defending against malicious actors and market manipulation. As we nurture our ecosystem, it will continue to thrive and produce even more favourable results for our users — our network members.

Proprietary technology

Our technological infrastructure is reliable, scalable, and cost-effective: our code is proprietary on mobile, web, and backend; our code uses proven technologies implemented by companies such as Google and Apple; and we operate on AWS cloud computing service.

Data insights

Our current client base provides valuable data that can be converted into derivative knowledge. We have data about food products around the world such as product pricing, product availability, and purchasing trends for particular geographic areas and globally.

When our Marketplace is launched, we will have even more data which will enable us to produce more comprehensive derivative knowledge. For instance, we will be able to predict future market behaviour, market trends, and market opportunities.

This data is guarded — we do not sell our users’ data. Only we are able to view this data — we keep it within our company. We produce data insights ourselves to improve user experience and for product development.
OUR MARKET OPPORTUNITY

We anticipate that by 2040, the world will face a global food scarcity crisis that will trigger widespread political and market instability.\(^2\)

We expect that this crisis will be rooted in food distribution inefficiencies rather than food production issues.\(^3\) Evidence to date indicates that, every year, approximately 1.3 billion tonnes of food is lost or wasted every year: 670 million tonnes of food in high-income countries; 630 million tonnes in low- and middle-income countries. This lost and wasted food constitutes one-third of edible food originally intended for human consumption.\(^4\)

We are confident that if our enterprise is successful, this crisis can be prevented.

Leading mobile/tablet technology

Smartphones and tablets are indispensable tools for modern food businesses. Our experience with food industry professionals indicates that mobile and tablet technology is being adopted at a higher rate than ever — this is rapidly transforming how food supply chains are managed.

Our App is trusted and proven mobile/tablet technology, and it serves both sides of the buyer-seller relationship, end-to-end.

Our expertise makes us uniquely equipped to provide food supply chain management technology for industrial/commercial users and, subsequently, retail users.

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\(^2\) Statement by George Kantor of FarmView, a “multidisciplinary SCS research endeavour to develop a comprehensive system of sensing, robotics and artificial intelligence technologies that will improve plant breeding and crop-management practices through automated, data-driven decision tools.” https://www.cs.cmu.edu/sites/default/files/TheLink_winter2016_farmview.pdf.


See also C. Hiç, P. Pradhan, D. Rybski, and J. P. Kropp, “Food Surplus and Its Climate Burdens” (2016), Environmental Science & Technology, 2016:50 (8), pp 4269-4277, DOI: 10.1021/acs.est.5b05088.

Food supply chain management

Consumers are becoming increasingly knowledgeable about food safety and food supply chains. Traceability reveals food quality aspects and helps consumers make informed decisions about their food purchases. As discussed in the CONSUMER DEMAND FOR TRACEABLE FOOD section below, consumer demand for food with a traceable history will only increase as time goes on.

We anticipate that consumer demand from China will be a catalyst for this development. From taste trends and dietary concerns to purchase volume of commercial food goods, China’s consumer base will be globally influential. The global supply and demand of food is set for a revolution.5

These factors will drive growth in global consumer consciousness and inspire consumers around the world to take control of their food supply chains.

Our platform will provide our users with a competitive edge: as early adopters of the leading technology, they are prepared to meet this newfound consumer demand. Through our platform, users who are suppliers can offer consumers transparency and controllability — the movement of their FOOD GOODS through supply chains will be traceable and verifiable. For a detailed discussion of this topic, refer to the FOOD TRACEABILITY AND BLOCKCHAIN section below.

Traceable, verifiable food products

We foresee that future demand for a new breed of food products is on the horizon: food products whose SUPPLY CHAIN HISTORY is traceable and whose characteristics can be independently verified by consumers themselves.

We anticipate that this market will grow rapidly over the next five to ten years: in the early stages of this market, these food products will be exclusive, premium goods; then as the market matures, mass food products will follow.

Our platform will provide our users with the technological infrastructure for tracing and verification — we make it easy for suppliers to provide information that consumers want to know. For a detailed discussion of this topic, refer to the FOOD TRACEABILITY AND BLOCKCHAIN section below.


Management autopilot for food businesses

Our platform will provide more comprehensive management autopilot for food businesses. Through business intelligence engines and artificial intelligence, our platform will make smarter business decisions on our users’ behalf and achieve stronger financial results than they would achieve if they used only human effort.

This is a valuable tool for our users because it frees them from constant hands-on control by human operators. This allows them to shift focus from behind-the-scenes to the front-end of their business. Users who wish to entirely eliminate human management of their businesses will eventually have the option to do so: they can set our technology to manage their business without any human oversight and check in (with human eyes) as infrequently as they wish. For a detailed discussion of this topic, refer to the LONG-TERM DEVELOPMENT TRAJECTORY section below.
The Exchange (the “EXCHANGE”) is a centralized digital exchange for cryptocurrency, specifically, Ethereum and YUM.

The Exchange is open for trading 24 hours a day and 7 days a week. Trading on the Exchange is halted during maintenance periods. Additionally, Exchange trading is halted as necessary in order to ward off attempts at market manipulation and other types of attack on the Exchange, such as Denial of Service (DoS) attacks.

The Exchange is the only venue to purchase and sell YUM — YUM can be purchased using Ethereum and sold for Ethereum.

The Exchange serves a gatekeeper function:

- In order to trade on the Exchange, users must create an account on the Exchange (“EXCHANGE ACCOUNT”) and complete the verification process.

- The verification process consists of uploading the required verification materials for verification by the Exchange (“EXCHANGE VERIFICATION”). Exchange Verification is an assessment of whether a person has met the Exchange’s KYC requirements. A person becomes verified when it is determined that they meet the Exchange’s KYC requirements.

- Once verified, users become “VERIFIED TRADERS” and can then deposit Ethereum to their Exchange Account.
Furthermore, YUM can only be transferred from one Ethereum address to another Ethereum address after receiving a digital approval from the Exchange.

For an Ethereum address to receive digital approval from the Exchange, it must be “whitelisted” by the smart contract governing YUM.

An Exchange Address is whitelisted if it is listed under a Verified Trader’s Exchange Account. A whitelisted Exchange address is a “VERIFIED ADDRESS” because they are deemed to be the responsibility of the listed Verified Trader.

**EXCHANGE FEATURES**

Exchange transactions are not reflected on the Ethereum blockchain because they occur “off-chain”. This means that Exchange transactions do not incur any “gas” cost.

Exchange transactions will eventually incur **EXCHANGE COMMISSIONS**, which will be a percentage of Exchange transaction amounts. There will be a range of Exchange Transaction Fees which will depend on various factors such as transaction type (for example, market maker and market taker transactions).

Most importantly, only Verified Traders are able to use the Exchange.

**Buying and selling YUM**

Only **VERIFIED TRADERS** can

- deposit into and withdraw Ethereum from the Exchange,
- buy YUM on the Exchange using their deposited Ethereum, and
- sell their YUM for Ethereum on the Exchange. Sale proceeds in Ethereum will be reflected in their Exchange Account.

**YUM deposits and withdrawals**

Only **VERIFIED TRADERS** can

- deposit and withdraw YUM from their Exchange Account,
- deposit YUM into their Exchange Account by sending YUM from a **VERIFIED ADDRESS** to their Exchange Account, and
- withdraw YUM from their Exchange Account to a Verified Address.
YUM transfers

Only **VERIFIED TRADERS** can only transfer YUM to **VERIFIED ADDRESSES**. If the receiver is another Verified Trader, then the YUM transfer will be seamless: the sender can transfer YUM from their Exchange Account to the receiver's Exchange Account. If the receiver is not a Verified Trader, then the receiver must complete **EXCHANGE VERIFICATION**.

Trading cryptocurrency

YUM Holders can buy and hold YUM, and wait for their value to increase. This is similar to fiat forex trading, where traders buy and hold foreign currency with the goal of profiting from different currencies’ economic performance.

Just like a forex trader, Verified Traders can trade cryptocurrency (viz. Ethereum and YUM) in the Exchange. A Verified Trader can hold a position for as briefly as a few minutes to much longer, for instance, several years. (For a detailed discussion of this topic, refer to **APPENDIX I: TRADING CRYPTOCURRENCY VS. FOREX TRADING** below.)

There is a crucial difference between the fiat forex traders versus Verified Traders trading cryptocurrency: the latter has the ability to directly affect the economic performance of the (crypto)currency.

Verified Traders are members of the Fillet ecosystem — they are empowered and motivated to grow the ecosystem, and have a hand in its growth. Verified Traders are active members of the Fillet ecosystem because their activities are an inextricable, vital part of the Exchange’s existence. Furthermore, it is likely that Verified Traders will be active participants in other parts of the ecosystem, like the App and, eventually, the Marketplace. In these ways and more, Verified Traders play a significant role in YUM’s economic performance — increases in YUM’s value are a testament to their efforts as members of the Fillet ecosystem.
FUTURE VISION

SMOKE TESTS

Sending and receiving payments using cryptocurrency
Listing and selling on Fillet

FUTURE FEATURES

Marketplace
  Identification technology and Traceable Food
Fillet Financial
Fillet Realty
Futures Trading

LONG-TERM DEVELOPMENT TRAJECTORY

SMOKE TESTS

We ran two smoke tests on iOS in 2017 to gauge user interest in upcoming App features. These features are completely new, unannounced, and unpublicized. The results of the two smoke tests are below.

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**FUTURE FEATURES 17**

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**LONG-TERM DEVELOPMENT TRAJECTORY 19**

In the App, the user is asked if they want to send and receive payments using cryptocurrency.
Sending and receiving payments using cryptocurrency

This smoke test gauged user interest in using cryptocurrency to send and receive payments.

Users were required to register and verify their email address in order to discover and access this smoke test section of the App. Users who tapped “Continue” indicated positive interest in sending and receiving payments using cryptocurrency.

This smoke test had an acceptance rate of 85%, which is highly promising. YUM, the Exchange and the Marketplace are all building on the strong user interest indicated in this smoke test.

Listing and selling on Fillet

This smoke test gauged user interest in listing their products on Fillet, listing their businesses on Fillet, and selling their products on Fillet.

Users were required to register and verify their email address in order to discover and access this smoke test section of the App. Users who tapped “Continue” indicated positive interest in listing and selling on Fillet.

This smoke test had an acceptance rate of 85%, which is highly promising. The Marketplace will capitalize on the strong user interest indicated in this smoke test. We view the two smoke tests to be complementary, thus, YUM and the Exchange are designed to bolster user experience when listing and selling on Fillet.
FUTURE FEATURES

Marketplace

Identification technology and Traceable Food

We aim to provide a blockchain-enabled solution for buyers and sellers of food products that will allow them to reveal the SUPPLY CHAIN HISTORY of each individual product produced from point of production to point of consumption by the end user.

This identification & tracing technology will be the core of “FILLET VERIFIED” food products.

Fillet Financial

Small and medium-sized enterprises (SMEs) often struggle with financing issues. With a view to food business SMEs ("FOOD-SMES"), FILLET FINANCIAL will offer financing options that are alternatives to conventional debt and bank financing.

Using our industry expertise, Fillet Financial will provide options that address Food-SMEs’ particular financing needs. For example, Fillet Financial will evaluate Food-SME applicants based on various factors and provide a range of financing options. Our industry expertise makes us uniquely adept at seeing value in different types of collateral (food manufacturing machinery, professional kitchen equipment, etc.) and providing financing on those strengths. This will be highly valuable to Food-SMEs because credit history and collateral is a major obstacle that most SMEs encounter when trying to secure financing. Moreover, Food-SMEs in a financial relationship with Fillet will be able build their “credit reputation”.

Working with Fillet Financial allows Food-SMEs to kickstart their businesses, which allows them to build a positive reputation on the Marketplace. Over time, they will gain a “credit reputation” that is reflected throughout the Fillet ecosystem.

In this way, Fillet Financial helps Food-SMEs to overcome a financing "catch-22": A business has no credit, so that business cannot get financing; That business cannot get financing, so that business cannot build credit.

Using our platform, Food-SMEs will build their reputation over time and eventually, the public will begin to see the Food-SMEs’ reputation throughout Fillet ecosystem. Lastly, the Fillet Financial platform will facilitate an automatic accounting system and automated loan repayment.

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Fillet Realty

Fillet Realty will be a roster of commercial real estate listings that Fillet businesses can lease. Fillet Realty's terms of leasing will be customizable and flexible compared to more traditional lease arrangements.

A subset of Fillet Realty lease arrangements will be designed with the goal of helping the Food-SME succeed. These terms can include variable lease payment schedules, automated lease payments, and customized payment collection methods.

The key motivation for Fillet Realty is simple: users trust Fillet with their business management, and Fillet wants their business to succeed because thriving businesses boost the network effects within the Fillet ecosystem.

Furthermore, Fillet Realty will actively monitor the global real estate market prices, do data analysis, and strive to price Fillet Realty leases more competitively than regional market prices. If a Food-SME is unsure whether to lease a Fillet Realty listing, they can still use our data and analysis in their decision-making process.

Futures Trading

For the purposes of the Marketplace, a "FUTURE" is an agreement to buy or sell a commodity at a set price (the "FUTURE PRICE") at a set time in the future ("DELIVERY DATE"). Each Future will specify the quality, quantity, Delivery Date, and delivery location for the commodity. Futures are completed on the Delivery Date because, on that date, the actual physical commodity is delivered as settlement of the agreement. (Note that a warehouse receipt or some other negotiable instrument can be delivered in lieu of the actual physical commodity.) On the Delivery Date, each party is contractually obligated to deliver on their part of the agreement: the buyer of a Future is obligated to buy the underlying commodity; and the seller of a Future is obligated to sell the underlying commodity to the buyer.

Verified Traders can buy and resell Futures listed on the Exchange, as described in the following example:

- On Day 1, A seafood supplier lists a Future for tuna on the Exchange. The Future costs 100 YUM (the Future Price) and will be delivered on Day 100 (the Delivery Date).
- On Day 5, a Verified Trader buys the Future.
This Verified Trader has two options: (A) wait for the Future to be delivered on Day 100, or (B) resell the Future at any time before Day 100. The result of Option A is that on Day 100, the Verified Trader can enjoy the goods for the price of 100 YUM. The result of Option B is that the Verified Trader earns a profit (if the goods’ market price is rising) or takes a loss (if the goods’ market price is falling). Whoever buys the Future from the Verified Trader has the same options.

On Day 100, the tuna is delivered to whoever owns the Future.

Verified Traders can sell Futures of their products to other Verified Traders or to the Exchange itself. The latter is illustrated in the following example:

- On Day 1, a seafood supplier sells a Future for tuna to the Exchange for 100 YUM (the Future Price); the tuna will delivered on Day 100 (the Future Date).
- The Exchange owns the Future, and resells the Future at some time before the Day 100 (i.e. Option B as described above).
- Futures sold to the Exchange will listed for resale after the Exchange buys the Future. The Exchange’s resale price may be different than the Future Price the Exchange paid the supplier. Furthermore, the commodities underlying all Futures bought by the Exchange will be traceable on the Marketplace.
- On Day 5, a restaurant buys the Future from the Exchange and does not resell it.
- On Day 100, the supplier delivers the tuna to the restaurant. (Note that buyers of Futures can arrange for commodities to be delivered to any location they choose and to have delivery occur on a date after the Delivery Date.)

LONG-TERM DEVELOPMENT TRAJECTORY

In our vision of the future, humans are no longer involved in planning or managing of food business operations. Instead, all aspects of the food business operation are handled by AI.

For example, imagine an owner of a restaurant. The owner connects with an AI interface and receives notifications informing of the results of data analysis for their geographical area. The AI collates, analyzes, and summarizes many different sources of information when performing the data analysis. The product offering, the menu, for the owner’s business is then selected by the AI, although the owner does have knowledge of the data analysis results underlying the AI’s decision.
The AI’s product offering decision is also partially based on the AI’s predictions as derived from the data analysis for the owner, as well data from other operations in the area, operations that are on the network, just like the owner. Thanks to AI management of their business operations, the owner is free to work on the purely human aspects of his business, like face-to-face customer interaction.

AI will minimize or even eliminate poor business management decisions for new F&B businesses.

The food and beverage (F&B) industry is infamously unforgiving: most restaurants do not survive their first year of being in business. Despite millions of dollars of upfront investment and skilled professionals on staff, most people who launch F&B businesses do not actually know how to manage a business. For instance, a business should never depend on the success of a novel idea — this is fundamentally bad business practice because it is unsustainable and unjustifiably risky. Every product offering must be balanced: risk against stability, novel against tested and proven. This is a universally accepted principle of F&B business management, yet is often ignored by F&B businesses because they lack logistics and accounting knowledge. Their strength is their creative spark, which they cannot maximize because business management strains their resources.

Fillet AI will advise against such practice, and businesses that decide to persist will be automatically marked as a high risk investment. Additionally, they will not be endorsed as having a good “credit reputation” on the Marketplace. With Fillet AI managing their operations, F&B businesses have a better chance of being viable long-term.

Even functional F&B businesses are vulnerable to poor business management. The fact that a restaurant goes out of business has nothing to do with bad food or negative customer response. In fact, the opposite might be true. A core issue with purely human business management is human computational limitations — humans cannot solve complex problems with large data sets in their head or even on paper. Imagine a restaurant dealing with 10 suppliers who carry 1,000 products, each with different prices and delivery schedules. This problem is a difficult for a computer solve, let alone a human. Humans will take shortcuts and rely on heuristics.

Fillet AI will preempt inefficient practice and minimize human error by doing the complex data analysis. It will show humans the results of the analysis and, if operations management is not fully automated, then humans can decide how to proceed.
AI will establish equilibrium between inventiveness and stability for businesses in our network. AI will not stifle human originality and creativity. Instead, it will create a sandbox for safe experimentation. Businesses can innovate freely and try new things knowing that a built-in landing pad business fundamentals is in place.

For example, imagine the chef of a restaurant whose operations are managed by AI. The chef wants to offer an experimental menu item that is creative and unexpected. The issue is that the restaurant has never offered this type of menu item before and the owners do not know if customers will be interested. Since the restaurant is managed by AI, the chef tells the AI that the restaurant will be offering a new menu item and inputs details of item like its retail price, ingredient costs and labour costs. The AI will analyze the inputted details and structure the menu so that it has a balance of popular bestsellers that will sustain the business and minimize loss if the experimental items fail to sell. In this scenario, AI protects the business from financial instability and frees the humans to explore new opportunities for profitable creativity.

Fillet AI will nurture healthy businesses in the Fillet ecosystem.

Ask any chef whether would they prefer to constantly crunch numbers or just focus on perfecting their signature dish — the answer is obvious. Fillet AI will protect and nurture healthy business in our network on various fronts: it will improve on good businesses practices; identify areas where changes can be made to improve the business without compromising the bottom line; and caution against short-term decisions that expose the business to harm in long-term. (Short-term changes are often the easiest to implement, but have the potential to cause serious future harm.) Fillet AI harnesses the vast amount of data about businesses in our network and global markets to fill the gaps in human ability, knowledge, and foresight. This data means the Fillet AI is much more capable at assessing risks associated with every loan, every business change, and every business partnership than a human could ever be.

Fillet AI will protect the overall Fillet ecosystem so that profitability and baseline financial stability will be maintained. The health of the Fillet ecosystem will not be jeopardized by human fallibility.
Today it is virtually impossible for someone to pick up a food item from a grocery store and know its “life story”: what ingredients it is composed of, where those ingredients came from, how it was stored and transported, and so on. Part of this is due to macro-level political and economic forces. That said, there are major technological limitations regarding supply chain reporting and food tracing.

Most packaging barcodes in use today can only identify the type and brand of product and do not differentiate between different items of individual products. They do not carry the history or details about specific products beyond a simple identifier.

On the politico-economical front, it can be disadvantageous for certain products to be traceable because the consumers would value them differently depending on the origin, such as domestic or from a particular region. This complicates scenarios where a contaminated batch is produced and entire categories of products need to be taken off the shelves in the recall because it is uncertain which specific product batch was contaminated.

Nonetheless, consumers are becoming increasingly aware and knowledgeable about supply chains and food safety. As consumers grow more informed about food safety, so do their interest in food quality. While information about familiar food safety risks like food-borne pathogens, pesticides, and hormones are required to be released as public announcements, food quality characteristics are typically hidden. Food safety is only one aspect of food quality.
Food quality characteristics tell the whole "life story" of the product: its safety, its supply chain history, and more.

Consumer curiosity about production practices is fed by access to information. Traceable food history reveals food quality characteristics that are hidden by default, and ultimately, it empowers consumers make informed purchasing decisions. Consumer demand for food with a traceable history will only increase as time goes on and access to information becomes desirable.

This rising consumer demand presents us a challenge and a welcome opportunity.

**PREMIUM QUALITY, A “LIFE STORY”**

Many quality characteristics are difficult or impossible for consumers to verify for themselves even after consumption. (In economics terms, these are known as “credence goods”.) Currently, companies use various certifications and labeling to assuage consumers’ inability to self-verify. However, this sort of labeling not solve the issue that a lot of information about food quality is hidden from consumers. Today’s global food trade means that food now travel over longer distances and through more hands before reaching the consumer — supply chain history is more important than ever before.

Traditionally, consumers and businesses rely on governments to manage all information about food quality. This reliance is problematic because governments are not focused on providing enhanced information, like the different quality standards of importing and exporting countries or reconciling different standards for quality across countries, and how that information affects consumer decision-making.

Moreover, it is unwise to expect governments to satisfy competing interests: consumer concerns about quality and choice are at risk of exploitation by business associations; businesses associations have the incentive and influence to promote government policies; such polices can be protectionist, aimed at preventing competition from the global food trade, rather than providing legitimate consumer protection.

Rather than frame one country’s food quality standards using another country’s standards, we aim to provide a holistic, cross-referential overview of the different food quality standards and definitions being used internationally. For example, USDA certification that a product is “organic” means that certain criteria has been met. Fillet will cross-reference this criteria with other authoritative certification systems for organic goods and provide a “report card” for the viewer understand and meaningfully evaluate what attributes their food product has.
In fact, there is much profit to be made from selling food with the quality characteristics that consumers want — consumers will pay premium prices for these desirable characteristics.\textsuperscript{7}

Food products that can be distinguished by a detailed range of quality characteristics will be the first wave of these premium products.\textsuperscript{8}

**Multidimensional descriptions**

A unified quality framework that systematically analyzes several dimensions of quality and quality assurance is crucial to consumers shopping in a globalized food marketplace — the dimensionality of attributes is constantly evolving (and rapidly so) as consumers in different countries place different values on different food quality attributes. We recognize this challenge and plan to capitalize on it by integrating multidimensional descriptions of food quality characteristics throughout our future ecosystem. This integration will

- enhance user experience,
- provide a competitive advantage for users who are suppliers, and
- generate valuable insights, such as detailed derivative knowledge about consumer purchasing decisions.


\textsuperscript{8} “The increasing demand for high quality, health, and social-responsibility concerns will make product-attribute labeling an important marketing tool for the future. As food products with unobservable quality attributes are increasingly marketed, the information issues and their implications for food-supply chains, markets, and trade will continue to gain prominence.”

Our users will be able to see how a food product would be certified (organic, free trade, GMO, etc.) in many different countries. Our users can focus on what characteristics are important to them and see how their food product measures up in the international marketplace. Eventually, we may design our own grading system that summarizes the different certifications for the user so that they do not need to digest the information themselves and can simply see what grade the food product received and make their decisions that way. This will take comparison shopping to new heights, providing an elegant and efficient shopping experience.

The terminology commonly used to describe food quality characteristics is based on a one-dimensional view of quality: based on the information available to the consumer, food products are categorized as “search goods”, “experience goods”, or “credence goods”.  

- “Search goods” are products for which consumers can obtain information to judge quality prior to purchase.
- “Experience goods” are those for which quality can be judged after purchase and use.
- “Credence goods” have quality characteristics that cannot be accurately judged even after purchase and consumption. For example, consumers cannot taste or otherwise distinguish between conventional corn oil and oil made from genetically engineered corn. Even more precisely, “process credence” characteristics do not affect final product content; they refer to characteristics of the production process. Process attributes include country of origin, free-range, dolphin-safe, shade-grown, earth-friendly, and fair-trade. Generally, neither consumers nor specialized testing equipment can detect process attributes.

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“[C]ommunication policies should aim at increasing trust relationships along the food chain, ensuring that products comply with the standards of animal welfare claimed...policymakers and [creators of] public and private schemes need to understand how to create a monitoring system which removes any doubt arising from the several stages of production, processors, and supermarkets.”


Traceability is an integral part of any market involving credence goods or process credence characteristics. This is because the existence of defining characteristics can only be verified through record-keeping that establishes the creation and preservation of the characteristics. For example, tuna caught with dolphin-safe nets can only be distinguished from tuna caught using other methods through a record-keeping system that ties the dolphin-safe tuna to an observer on the boat from which the tuna was caught. The information available to consumers like appearance of a product (called “intrinsic cues”) and information provided about the product such as labels (called “extrinsic cues”) do not confirm or refute credence characteristics. Without traceability providing authoritative evidence, the market for credence goods like dolphin-safe tuna, fair-trade coffee and non-biotech corn oil are at risk of destabilization.

The currently, commonly used terminology is too narrow to describe the multidimensionality of food quality characteristics. Goods can have multiple attributes with different quality levels and information environments. For example, the tenderness of beef is an experience attribute, but the conditions under which the animal was raised is a credence attribute. Which details are considered relevant to traceability will vary depending on the product’s characteristics:

<table>
<thead>
<tr>
<th>Stages of Production</th>
<th>Attributes of Coffee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Decaf</td>
</tr>
<tr>
<td>Processing</td>
<td>✓</td>
</tr>
<tr>
<td>Sale from producer to wholesaler/retailer</td>
<td>✓</td>
</tr>
<tr>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td>Storage</td>
<td></td>
</tr>
<tr>
<td>Harvest</td>
<td></td>
</tr>
<tr>
<td>Cultivation</td>
<td></td>
</tr>
<tr>
<td>Bean/seed</td>
<td></td>
</tr>
</tbody>
</table>

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Descriptions of quality that express the multidimensionality of food characteristics will translate into valuable (and indeed profitable) gains.¹⁴

**FILLET VERIFIED**

We aim to provide a blockchain-enabled solution for buyers and sellers of food products that will allow them to reveal the **SUPPLY CHAIN HISTORY** of each individual product produced from point of production to point of consumption by the end user. This identification & tracing technology will be the core of “**FILLET VERIFIED**” food products.

We have specialized understanding of the multidimensionality of food quality characteristics. We will channel this into building a unified quality framework that is useful to everyone from industry professionals to end consumers.

For example, for manufactured products with more than one ingredient, we can show **SUPPLY CHAIN HISTORY** for each ingredient. Enhanced information about processed organic goods — users can see that each ingredient has organic Supply Chain History, such that the final product can truly be called organic. At first, adoption may be for premium producers only who want to showcase that their products are 100% organic as evidenced by the Supply Chain History.

We are at an advantage to analyze and capitalize on such industry developments and new information thanks to our users who give us insight into kitchens, warehouses and food businesses around the world.

**UUID Food Product Identification**

For our first generation of tracing technology, we will have an immutable record of inventory of products consumed. Each item will bear a universally unique identifier (UUID) as well a secret code that can be used to mark the item as consumed on the blockchain. UUID is used to verify if a product has been already purchased and also to look up the product’s **SUPPLY CHAIN HISTORY**.

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¹⁴ McCluskey and Loureiro, 2003, p 101:
“[A]reas of the greatest potential interest for future research will include comparisons of different valuation approaches, such as stated vs. revealed preferences…the effect of information on consumer preferences and willingness to pay; and incorporation of other disciplines, such as sensory input, psychology, and marketing.”
When the consumer is buying an item, they are able to scan the UUID of the item to get information about the product:

- check if it has been recalled,
- been marked as consumed, and
- see its Supply Chain History.

If a counterfeit good is being scanned, then the consumer will see that the UUID that is displayed on the packaging is not recognized by our internal database and the blockchain. The consumer can then avoid purchasing the fake goods.

Once the consumer has purchased the item they will be able to open the packing to reveal a secret code on the barcode that, when scanned using our iOS and Android application, opens a connection to our server which will automatically mark the product as consumed in our internal database as well as the blockchain.

**Consumer feedback**

Currently, there are limited traceability systems for tracking food after it has been sold and consumed.\(^{15}\) There are some government-supplied systems for monitoring the incidence of food-borne illness, such as FoodNet\(^{16}\) and PulseNet\(^{17}\), but no systems provided by industry or retail.

Food-borne illness surveillance systems increase the capability of the entire food supply chain to respond to food safety problems before they grow and affect more consumers.

We plan to develop options for consumer feedback on food products purchased on the Marketplace. We will also cross-reference information from sources like FoodNet and PulseNet, and provide a “report card” for the viewer to review how a food product has been evaluated.

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INTELLIGENT LOGISTICS

From the beginning of the food product’s lifetime, as it passes through each “milestone” in its lifetime, information about the product’s SUPPLY CHAIN HISTORY can be recorded, verified and distributed on the blockchain:

- originating source (e.g. free-range egg producer, farm using pesticides, organic fishery),
- crop/herd/unit/batch/shipment numbers,
- manufacturing/processing details (e.g. handler type [factory, mill, packaging plant], treatments/processes used, additives),
- delivery dates (to each and every party involved),
- transport/shipping records,
- and more.

Intelligent logistics\(^{18}\) based on detailed environment/event logs will be a powerful source of knowledge — this is what we will provide to our users. For our users who are suppliers and sellers, these logistics will be advantageous: greater efficiency and insight into the products underlying their business will prevent them from operating under inaccurate, outdated information. That said, all our users will benefit from these logistics because the multidimensionality of quality characteristics creates comprehensive yet practical information.

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**YUM**

**OVERVIEW**

YUM is an Ethereum-based cryptocurrency that is controlled by an Ethereum smart contract. One core purpose of YUM is to utilize blockchain technology to streamline and simplify payments.

YUM will be integrated into and across the different components of the Fillet ecosystem: within the App, on the Exchange, in the Marketplace, and beyond. This means that persons holding YUM ("YUM HOLDERS") will enjoy multi-platform functionality and features.

Fundamentally, YUM Holders play a significant role in YUM’s economic performance. YUM Holders are crucial to growing the ecosystem and YUM’s utility, which by extension, cultivates YUM’s value.
List of YUM features and uses

1. Checking YUM balances
2. Marketplace transactions
3. Extending a peer-to-peer (P2P) YUM loan through the Marketplace
4. Taking out a P2P YUM loan through the Marketplace
5. Buying and selling YUM for Ethereum on the Exchange*
6. Depositing YUM into and Withdrawing YUM from the Exchange*
7. Transferring YUM through the Exchange*
8. Trading cryptocurrency*

*For a detailed discussion of these topics, refer to the EXCHANGE FEATURES section above.

Checking YUM balances

At any time, YUM Holders can check their YUM balance and see how much YUM they own.

Similarly, YUM Holders can look up the YUM balance of any Ethereum address. (The identity of an Ethereum address’ owner will not be publicly visible or ascertainable.)

The total number of YUM is fixed and publicly visible, therefore YUM Holders can determine what percentage of the YUM total is owned by an Ethereum address, including their own.

Marketplace transactions

Marketplace users will use YUM to settle their transactions. For example, a buyer (e.g. a restaurant) uses YUM to pay a seller (e.g. a seafood supplier) for certain goods, and the seller accepts YUM as payment from buyer for the goods supplied.

YUM will eventually be the only method of payment accepted on the Marketplace. This means that Marketplace users will need to become YUM Holders in order to settle Marketplace transactions like making and receiving payments.
Extending a P2P YUM loan

YUM Holders can list peer-to-peer (P2P) “YUM LOANS” on the Marketplace.

YUM loans can be made to a specific Verified Trader or offered to the world at large (“YUM LOAN OFFER”), YUM Loan Offers can only be accepted by Verified Traders. Offers to the world at large create opportunity for numerous potential borrowers, such as FOOD-SMES who are Marketplace users and who prefer YUM Loans to Fillet Financial.

YUM Loan Offers will specify the terms of the loan, such as the principal amount of the loan, disbursement of principal amount, the daily interest rate charged on the principal amount, and the date when the loan is due for repayment.

At the time of loan repayment, the principal amount and the interest accrued will be deducted from the borrower's Exchange Account.

Taking out a P2P YUM loan

YUM Holders can list P2P YUM LOANS on the Marketplace, but only Verified Traders can take out a YUM loan. This means that a potential borrower must become a Verified Trader in order to browse and accept YUM Loan Offers.

Once they have accepted YUM Loan Offer, the borrower agrees to be bound by the terms of the loan as listed. The borrower will then receive the YUM Loan principal amount according to the terms of the loan regarding disbursement of principal amount.

Sources and stabilizers of YUM value

YUM’s value is derived from numerous sources. One significant source is YUM Holders’ efforts. YUM Holders directly contribute to the Fillet ecosystem growth by nurturing network effects among our members. They are an essential driving force behind increasing YUM usage on the Exchange, Marketplace, and beyond.

In addition to YUM Holders’ efforts, YUM’s value is influenced by Marketplace activity.
Price stability in the Marketplace

Marketplace prices of food products and commodities ("FOOD GOODS") are influenced by a variety of factors. Consider the different prices of Food Goods around the world:

Food Goods are listed on the Marketplace by suppliers all over the world. In a sense, Marketplace Food Goods prices are a representative collection of global Food Goods prices.

That said, regionally specific determinants of Food Goods prices do not strictly determine Marketplace Food Good prices. This is because the Marketplace is designed to transcend geographical limitations.

The simplest benefit is that the prices of a Food Good are stabilized against regional price instability by averaging the global prices of that Food Good (i.e. the global average price). A more complex benefit is the ability of Marketplace suppliers to set their prices as they choose and directly offer their Food Goods to an international buyer base. This means that, even if the price of a particular Food Good decreases in a particular geographic region, the supplier can continue to set their price based on Marketplace prices for that Food Good.

Ultimately, Marketplace Food Good prices should at least match the global average price — this supports price stability in the Marketplace. By extension, a stable Marketplace boosts and bolsters the stability and value of YUM.

Marketplace redemption value

Eventually, all Marketplace transactions will be settled using YUM — YUM will be the only method of payment accepted on the Marketplace. For example, prices for Food Goods will be set in “YUM” and payment will be made in YUM.

Since YUM can be “redeemed” for real-world items listed on the Marketplace, YUM’s price is functionally linked to concrete prices and values of tangible goods. YUM’s convertibility into tangible goods enhances its value.

As more users around the world join the Marketplace and settle their transactions using YUM, the volume of usage and ubiquity of YUM increases. This translates to Marketplace growth and increases in YUM's value.
As more sellers use the Marketplace to sell their Food Goods, buyers will have more options to choose from. For example, the Marketplace will cater to buyers who are strategically focused on high volume of lower-grade goods as well as other buyers are only interested in premium goods from specific geographical areas.

As more users transact on the Marketplace, the variety of options for all user types (viz. end-consumer buyer, retail reseller, wholesale supplier, speciality producers, etc.) will increase. The positive feedback of network effects will attract more and more users to join the Marketplace and, ultimately, our ecosystem.

### YUM DISTRIBUTION

#### Amount of YUM in existence

The YUM Supply is purposely governed by a smart contract that cannot be altered. There will be a fixed supply of 3,000,000 YUM (“YUM SUPPLY”).

The number of YUM in the YUM Supply will not change — after the YUM Supply has been created, no new YUM will be created or issued.

#### YUM Reserve

There will be a reserve amount of YUM that is 5% of the total YUM Supply (“YUM RESERVE”). The YUM Reserve will be for Exchange operational purposes.

#### Ways to obtain YUM

There are several different ways to obtain YUM. The most straightforward way to obtain YUM is to purchase it. Users can use two payment methods to purchase YUM: Ethereum (on the Exchange) and fiat currency (on FILLETX.COM and the App). Purchases can be made from Fillet directly or from other users (i.e. Verified Traders).

Aside from a straightforward purchase, users can also obtain YUM by

- accepting YUM as payment on the Marketplace,
- earning interest on a P2P YUM loan extended through the Marketplace,
- receiving YUM via a P2P YUM loan taken out through the Marketplace,
- receiving YUM from another person (e.g. as a gift) via transfer through the Exchange, and
- receiving YUM as part of a promotion (similar to banks offering joining bonuses to new customers that are credited to their new account as cash).

**Receiving YUM purchases**

YUM can be purchased on the Exchange ([FILLETX.COM](http://FILLETX.COM)) using Ethereum or fiat currency. A user will begin the purchase process by placing a buy order for YUM on the Exchange. This buy order will be filled according to the user’s position in the Exchange order queue (the “QUEUE”), which is a timestamped list of buy and sell orders. The timestamp of a buy or sell order indicates the time that the order was placed by the user. Positions in the Queue are chronologically ranked according to the timestamps of buy and sell orders in the Queue. Once the buy order is processed, the purchase is complete and YUM will be immediately transferred to the user’s Exchange Account.

**Exchange trading of YUM**

YUM will only be tradable on the Exchange. YUM will not be available for trade on third-party cryptocurrency exchanges.

**YUM AND PAYMENTS**

YUM will be an attractive alternative to various payment methods that are currently available and commonly used, such as Automated Clearing House (ACH) transfers, wire transfers, electronic funds transfers (EFT), credit card payments, and cash. This will be especially relevant for the Marketplace, where YUM will eventually be the sole payment method. (For a detailed discussion of this topic, refer to [APPENDIX II: YUM AND PAYMENTS](#) below.)

"[R]etail payment schemes have a simple basic purpose, transferring value from one entity (the customer) to another (the merchant). Fundamentally, there is no reason that banks should be involved in organising this transfer,” except that banks have historically been the storage centre of value for customers.\(^{19}\)

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Cryptocurrency presents an alternative to traditional banking. YUM is simultaneously a storage centre of value and a conduit for transferring value. YUM exists to improve its users’ business operations, simplify account management, improve transaction efficiency, and streamline payments:

- YUM is an in-app cryptocurrency;
- YUM can be used to make instant, international payments worldwide;
- there are no foreign currency conversion fees;
- there are no losses resulting from unfavourable foreign currency exchange rates;
- there is no cost to recipients for receiving a YUM transfer or payment;
- costs of YUM transactions are minimal and upfront, not hidden from users;
- costs are not dependent on case-by-case factors that are unknown to users;
- costs are not dependent on financial institutions because YUM transfers and payments are made peer-to-peer;
- YUM is governed by a smart contract that avoids systemic limitations that compromise banking efficiency;
- there are no limits on the amount of YUM being transferred in a transaction or the number of YUM transactions; and
- YUM is immediately available upon completion of the transaction.

For all these reasons, YUM is an attractive, unparalleled alternative to commonly used payment methods for everyone, from food industry professionals to retail customers.
APPENDIX I: TRADING CRYPTOCURRENCY vs. FOREX TRADING

Referenced in TRADING CRYPTOCURRENCY section above.

YUM Holders can buy and hold YUM, and wait for their value to increase. This is similar to forex trading, where traders buy and hold foreign currency with the goal of profiting from different currencies’ economic performance. (Often, forex traders take a position based on one country's economic trends versus another country’s economic trends in an attempt to profit from how the two currencies perform against each other.)

Just like a person trading in the forex market, Verified Traders can trade cryptocurrency (viz. Ethereum and YUM) in the Exchange. A Verified Trader can hold a position for as briefly as a few minutes to much longer, for instance, several years.

Let us compare a long-term forex trade in the forex market with a long-term YUM trade on the Exchange:20

- Person #1 sells some yen to buy euros and holds on to that position for a few years. Person #1 is speculating on the growth of the European economy, which translates to an appreciation of the euro against the yen. If the euro increases in value compared to the yen, Person #1 earns profit. If the euro decreases in value compared to the yen, then Person #1 suffers a loss.

- Person #2 sells some Ethereum to buy YUM and holds on to that position for a few years. Person #2 is speculating that the YUM will appreciate against Ethereum. If the YUM increases in value compared to Ethereum, Person #2 earns profit because the YUM is worth more than Ethereum. If the YUM decreases in value compared to Ethereum, then Person #2 suffers a loss.

20 A long-term trade like this is known as a “buy-and-hold position”.
Person #1 and Person #2 are both taking a position based on how one economy performs against another. In other words, they are both making a bet that one currency (viz. the euro and YUM) will increase in value over the other (viz. the yen and Ethereum).

Let us also compare a futures trade in the fiat market with a futures trade in the YUM market on the Exchange.

Person #3 is a Japanese futures trader buying futures being sold by a European company. Since they must pay for those futures in euros, they must convert yen into euros to make payment. Person #3 is speculating on the increase in value of those futures and on the appreciation of the euro against the yen. Thus, Person #3 could potentially profit from the futures increasing in value and also from appreciating currency, i.e. the euro increasing in value compared to the yen. That said, if the futures decrease in value as well, Person #3 suffers a loss. If the euro decreases in value compared to the yen, then Person #3 suffers another loss.

Person #4 is another Japanese futures trader buying futures being sold on the Exchange by a European company. If Person #4 were trading outside the Exchange, they would be required to pay for those goods in euros, which means they would need to convert Ethereum into euros. However, since Person #4 is trading on the Exchange, they must have sold some Ethereum to buy YUM and then pay for those futures in YUM. By doing so, Person #4 is speculating on the increase in value of those futures and on the appreciation of YUM against Ethereum. Thus, Person #4 could potentially profit from the futures increasing in value and also from appreciating cryptocurrency, i.e. the YUM increasing in value compared to Ethereum. However, similar to Person #3, if the futures goods decrease in value, then Person #4 suffers a loss. If YUM decreases in value compared to Ethereum, then Person #4 suffers another loss.

Even though the examples above involve long-term trades, many forex traders are short-term traders, that is, they continually time the market swings with the goal of profiting from value differentials. YUM traders can attempt a similar goal and aim to profit from the short-term value differential between YUM and Ethereum.
The crucial difference between the fiat forex traders (Person #1 and Person #3) versus the cryptocurrency traders on the Exchange (Person #2 and Person #4) is the ability to directly affect economic performance of the (crypto)currency.

Although Person #1 and Person #3 can invest money into European companies, they cannot expect their investment to significantly impact the entire European economy and, by extension, increase their forex trading profits.

By contrast, Persons #2 and Person #4 are members of our network — they are empowered to directly participate in growing our ecosystem. Our network members (which includes YUM Holders) are committed to being active users of the Marketplace and the Exchange, and to maximize YUM usage applications. Thus, YUM Holders play a significant role in the YUM’s economic performance — increases in the YUM’s value are a testament to their efforts as members of our ecosystem.
This appendix examines how YUM will be an attractive alternative to various payment methods that are currently available and commonly used, such as Automated Clearing House (ACH) transfers, wire transfers, electronic funds transfers (EFT), credit card payments, and cash.

**ACH (Automated Clearing House) transfers**

An ACH transfer most often refers to an electronic movement of money between different banks through the ACH network, the electronic network for financial transactions in the United States. ACH involves large volumes of credit and debit transactions being processed in batches.

ACH credit transfers are often used for direct deposits of paycheques or government benefits. ACH direct debit transfers are a form of “pre-authorized payments” and are often used for recurring bill payments.

Presently, ACH transactions are mostly used for transactions within the United States; international ACH transactions are considerably rarer. All ACH transactions must comply with strict government requirements. Companies seeking to use ACH are responsible for setting up a system to

- identify ACH transactions,
- format data files according to governmental requirements, and
- paying any fines for non-compliance.

ACH transfers are saddled with fees, delays and transaction limits:

- **Transaction fees**: Banks generally charge fees for each ACH transaction;
- **Insufficient funds fees**: If a sender does not have enough money in their account to complete the transfer, their bank can charge them a fee and stop the transfer;
- **Transaction limits**: For ACH credit transfers, banks can have a daily and/or monthly cap on the amount of money a sender can transmit, as well as limits on the number of transactions for certain types of accounts;
• **Processing delays:** ACH transfers are processed in a few batches per day at set times, so it is easy to miss a batch and suffer delays. (For example, if money on a Friday after all batches have been processed for the day, processing will likely be delayed until Monday of the following week);

• **Uncertain/unclear processing times:** Even when the receiver’s bank has received the funds from the sending bank, the receiving bank often keeps the funds for a holding period, which varies in length and causes unclear processing times;

• **Funds are not immediately available** because of receiving banks’ holding period; and

• **International transfers not permitted:** Banks usually do not permit consumers (non-institutional persons) to make ACH transfers to banks outside the country, as is the case for the United States.

For these reasons and more, ACH transactions can take several business days to complete.

YUM payments are a faster, cheaper, more streamlined alternative to ACH transfers because

• YUM can be used to make worldwide, international payments,

• costs of YUM transactions are minimal and upfront, not hidden,

• YUM is governed by a smart contract that avoids systemic limitations (like processing delays) that undermine ACH transfers,

• there are no limits on the amount of YUM being transferred in a transaction or the number of YUM transactions, and

• YUM is immediately available upon completion of the transaction.

**Benefits over wire transfers**

Wire transfers are often affected by fees, delays and transaction limits similar to ACH transfers, as described above. In certain regards, those concerns are even more burdensome for wire transfers.

One major difference is the cost in fees: wire transfer fees are more expensive than ACH transfer fees. For example, the fees for sending a bank wire transfer within the United States usually range between $20 and $30; these fees are incurred with each transfer sent. Additionally, banks can charge fees to the receiver for receiving wire transfers.

International wire transfers are burdened by longer processing times than ACH transfers and domestic wire transfers; they can take several days or longer to complete.

Furthermore, international wire transfers tend to have hidden costs stemming from subprocesses like currency conversion. For example, it is a well-
known fact that banks (whether in the U.S. or otherwise) generally charge customers higher exchange rates than they would charge another bank. A less favourable exchange rate results in higher cost to the customer. These costs are charged on top of currency conversion fees, which are charged by the bank for providing the conversion services.

Fees are highly dependent on case-by-case factors that are typically not known to senders or receivers of wire transfers. A few of the factors include the amount of funds being transferred, the destination of the transferred funds, and the policies and fee structures of the financial institutions (bank or non-bank) involved.

YUM payments are a faster, cheaper, more streamlined alternative to wire transfers for similar reasons as stated above regarding ACH transfers:

- YUM can be used to make instant, international payments worldwide;
- costs of YUM transactions are upfront, not hidden, and minimal compared to sizeable wire transfer fees;
- fees are not dependent on case-by-case factors that are unknown to wire transfer senders and recipients;
- fees are not dependent on financial institutions because YUM transfers and payments are made peer-to-peer;
- there is no cost to the transfer recipient for receiving a YUM transfer;
- there are no currency conversion fees;
- there are no losses resulting from unfavourable currency exchange rates;
- YUM is governed by a smart contract that avoids systemic limitations that compromise banking efficiency;
- there are no limits on the amount of YUM being transferred in a transaction or the number of YUM transactions; and
- YUM is immediately available upon completion of the transaction.

Benefits over ETFs (Electronic Funds Transfers)

ETFs resemble wire transfers, although they generally refer to one of the following:

- transfers via an international banking network (such as SWIFT);
- direct debit payments whereby a business debits the customer’s bank account to collect payment (may include "pre-authorized payments");
- online direct deposit payments initiated by the payer; and
- electronic bill payments made via online banking.
Cross-border or international ETFs can be complicated and may not be offered by certain financial institutions.

EFTs are related to ACH transfers and wire transfers, so naturally, EFTs are susceptible to issues similar to those described above: transaction fees, insufficient funds fees, transaction limits (on transfer amount and frequency), processing delays, uncertain processing times, delayed availability of funds.

Similar to wire transfers, EFT fees also depend on case-by-case factors that are typically not known to EFT senders or receivers, such as the amount of funds being transferred, the destination of the transferred funds, and the policies and fee structures of the financial institutions (bank or non-bank) involved.

YUM payments are a faster, cheaper, more streamlined alternative to EFTs for essentially the same reasons as stated above regarding ACH transfers and wire transfers.

Benefits over credit card payments

Food industry professionals seldom settle payment using credit card. For instance, a restaurant would rather not use credit card to pay wholesale suppliers of their ingredients. (In this example, the restaurant is the payor and their ingredient suppliers are “merchants” and payees.)

Even though credit cards are always an option, they are an unappealing option for several reasons. In practice, these reasons many food industry professionals/merchants from accepting credit card altogether. Behind-the-scenes paperwork, transaction fees and credit card terms-of-usage for merchants are two major reasons why merchants prefer accepting other payment methods over credit card.

Credit card processing (or “merchant services”) involves several steps:

- The payor uses credit card to pay the merchant;
- The merchant submits transaction information to the credit card payment processor;
- The credit card payment processor receives authorization for the transaction;
- The credit card payment processor collects funds from the bank that issued the payor’s credit card (the “issuing bank”);
- The funds are used to pay fees to the banks involved; and
- The remaining funds are finally delivered to the merchant.

Each of these steps takes time and has potential for error, which would cause processing delays. Merchants can receive funds within a few days provided that there are no delays or issues.
Credit cards are a highly profitable banking product, and this high profitability is often correlated with high fees charged to merchants and cardholders.\textsuperscript{21} Credit card systems generate high profits for banks through high fees on credit card use. This conflicts with merchants’ interests, which are better served by systems that have low fees and that do not maximize bank or system profits.\textsuperscript{22,23}

**Transaction fees**

For each credit card payment that merchants accept, they must pay a “merchant fee”,\textsuperscript{24} which is a percentage set by and paid to the banks involved. Merchant fees reduce the funds received by the merchant, and are the price that merchants pay for accepting credit cards.

Merchant fees add cost and complications to businesses, including food businesses:\textsuperscript{25}

- Businesses in some countries pay a far higher merchant fee on average than others. For example, merchants in Hungary, the Czech Republic and Portugal must pay an average fee of between 2.5\% and 3.1\% of the total transaction value to accept a MasterCard/Visa credit card. Fee percentage is 3 to 4 times higher than in Sweden, Finland, and Italy.
- Businesses pay a far higher merchant fee on average to accept credit than debit cards. For example, a merchant in the UK pays almost five times as high a fee on average for accepting a MasterCard credit card as compared to a MasterCard debit card.
- On average, businesses pay a far higher merchant fee to accept cards issued in the international networks than cards issued in the domestic networks. Typically, businesses pay 30-40\% lower fees on average for domestic debit card usage than for MasterCard (Maestro)/Visa debit.
- *International* payment systems make smaller businesses pay more than larger ones: Smaller firms typically pay 60-70\% higher fees on average for MasterCard and Visa credit and debit card transactions than larger businesses.

\textsuperscript{21} OECD, 2006, p 264.

\textsuperscript{22} OECD, 2006, p 58.

\textsuperscript{23} OECD, 2006, p 131: The savings to merchants for not paying merchant fees is significant: In Australia, reforms to credit card systems (effectuated over 2003 to 2004) resulted in a 0.5\% decrease in merchant fees. This decrease since the reforms saved merchants approximately $700 million AUD per year.

\textsuperscript{24} OECD, 2006, p 19.

\textsuperscript{25} OECD, 2006, p 265.
Funds charged to credit cards time to show up in the seller’s bank account; payment can be reversed. Many merchants will provide daily or weekly batches of sales instead of completing one transaction at a time — this adds processing time and adds delays to final delivery of funds to the merchant.

Even though a merchant has been funded, the transaction can always be reversed, such as when a customer initiates and wins a chargeback.

Restrictions on merchants

Credit card terms can impose restrictions onto merchants, such as

- a restriction preventing merchants from passing the additional costs associated with a credit card payment onto cardholders (known as the “no surcharge rule”), and
- a restriction prohibiting merchants from steering customers to less expensive forms of payment (known as the “no-steering rule”).

These restrictions vary depending on the type of credit card and the card’s country of origin.

Merchant criteria (“Payment schemes”)

“Payment schemes” are criteria that merchants must meet in order to be guaranteed payment. In practice, many transactions do not meet all the conditions for a payment guarantee. (For example, in the UK, such transactions would include payment over the Internet or by mail order.) For transactions that fall short of the criteria, the losses from disputed or fraudulent transactions often end up as the merchant’s responsibility.  

Risks of credit card usage regarding fraud

There are risks to the payor and payee whenever credit cards are used. The risks of credit card usage (i.e. making payment) and acceptance (i.e. receiving payment) also vary depending on the type of credit card and the card’s country of origin. In some countries, payors have limited protection against fraudulent use of their accounts and must pay for a significant portion of fraudulent transactions (unless they have insurance). That said, many fraud losses are actually borne by the retailers/merchants.

For all these reasons and more, food industry professionals tend to avoid using credit card to settle payment.

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Benefits over cash

For industrial and wholesale trade payments, cash is overshadowed by other payment options. This is because, despite the obvious perks of cash payments, cash can be inconvenient compared to other options. Moreover, these obvious perks are counterbalanced by obvious drawbacks:

- Need to withdraw/deposit cash at a bank;
- Risk (and legal consequences) of counterfeit and/or stolen cash; and
- Risk of cash being lost during transfer.

YUM is preferable to cash because of its enhanced features and sophisticated capabilities, to name a few,

- YUM can be used for instant, international payments worldwide,
- financial institutions are avoided because YUM transfers/payments are made peer-to-peer,
- there are no limits on the amount of YUM being transferred in a transaction or the number of YUM transactions, and
- compared to cash, it is easier for users to manage their YUM balances and view their YUM transaction history.

These features make it easier for users to deal with remote suppliers and international clients.