



The Grocery Industry, Reinvented

Decentralized Ecosystem Directly Connecting
Grocery Manufacturers and Consumers

www.ins.world

[One-Pager](#)

[Presentation](#)

[Telegram](#)

[Twitter](#)

[Facebook](#)

Version 1
September 19, 2017

INS team leverages four years of online grocery experience with Instamart - the leading independent online grocer in Russia. We are making the next step in disrupting the grocery industry - building the INS ecosystem.

MEDIA COVERAGE



INVESTORS



Mail.ru Group, founded by a legendary investor Yuri Milner, is the largest Internet company in Eastern Europe and the world's 7th largest company by pageviews. Mail.ru Group owns social networks (VK, Odnoklassniki), gaming (Armored Warfare, Skyforge, Perfect World), map services (Maps.me), car sharing (BeepCar), and food delivery (Delivery Club).

LEV KHASIS



First deputy CEO of Sberbank, the largest retail bank in Russia, with a decent experience in retail:

- CEO of X5 Retail Group, the largest grocery retail chain in Russia (2006-2011)
- Senior Vice-President of Wal-Mart (2011-2013)
- Vice-Chairman of Jet.com (acquired by Wal-Mart for \$3 billion in 2016)
- Board Member of Boxed.com
- Board Member of LendingHome.com

SERGEY SOLONIN



Entrepreneur with over 20 years of experience in the payment services and banking industries.

Founder and CEO of Qiwi Group, the leading provider of next generation payment services in Russia and the CIS with turnover exceeding \$10 billion

ILYA YAKUBSON



One of the best executives in the retail space. He was recognised as "Man of the Year in Retail 2015".

Ex-CEO of Dixy, #4 grocery retail chain in Russia (2009-2015)

DISCLAIMERS

The information set forth in this White Paper may not be exhaustive and does not imply any elements of a contractual relationship. The content of this White Paper is not binding for Company Parties and Company reserves the right to change, modify, add, or remove portions of this White Paper for any reason at any time before, during and after the Token sale by posting the amended White Paper on the website.

This White Paper does not constitute an investment, legal, tax, regulatory, financial, accounting or other advice, and this White Paper is not intended to provide the sole basis for any evaluation of a transaction on acquiring of the Tokens. Prior to acquiring the Tokens, a prospective purchaser should consult with his/her own legal, investment, tax, accounting, and other advisors to determine the potential benefits, burdens, and other consequences of such transaction.

Nothing in this White Paper shall be deemed to constitute a prospectus of any sort or a solicitation for investment, nor does it in any way pertain to an offering or a solicitation of an offer to buy any securities in any jurisdiction. This document is not composed in accordance with, and is not subject to, laws or regulations of any jurisdiction which prohibits or in any manner restricts transactions in respect of, or with use of, digital tokens.

The Token is not a digital currency, security, commodity, or any other kind of financial instrument and has not been registered under the Securities Act of 1933, the securities laws of any state of the United States of America or the securities laws of any other country, including the securities laws of any jurisdiction in which a potential token holder is a resident.

The Tokens are not being offered or distributed to, as well as can not be resold or otherwise alienated by their holders to, citizens of, natural and legal persons, having their habitual residence, location or their seat of incorporation in the country or territory where transactions with digital tokens are prohibited or in any manner restricted by applicable laws or regulations. If such restricted person purchases the Tokens, such restricted person has done so on an unlawful, unauthorized and fraudulent basis and in this regard shall bear negative consequences.

Company neither offers or distributes the Tokens nor carries on a business (activity) in any regulated activity in Singapore, in People's Republic of China or in other countries and territories where transactions in respect of, or with use of, digital tokens fall under the restrictive regulations or require from Company to be registered or licensed with any applicable governmental authorities.

Each purchaser of the Tokens is reminded that this White Paper has been presented to him/her on the basis that he/she is a person into whose attention the document may be lawfully presented in accordance with the laws of the purchaser's jurisdiction. It is the responsibility of each potential purchaser of the Tokens to determine if the purchaser can legally purchase the Tokens in the purchaser's jurisdiction and whether the purchaser can then resell the Tokens to another purchaser in any given jurisdiction.

Certain statements, estimates and financial information contained in this White Paper constitute forward-looking statements or information. Such forward-looking statements or information involve known and unknown risks and uncertainties which may cause actual events or results to differ materially from the estimates or the results implied or expressed in such forward-looking statements or information.

The English language White Paper is the primary official source of information about the project. The information contained in English language White Paper may from time to time be translated into other languages. In the course of such translation some of the information contained in the English language White Paper may be lost, corrupted or misrepresented. The accuracy of such alternative communications cannot be guaranteed. In the event of any conflicts or inconsistencies between such translations and the official English language White Paper, the provisions of the English language original document shall prevail.

CONTENTS

1. ABSTRACT	5
2. INTRODUCTION	10
2.1. GROCERY MARKET CHALLENGES	10
2.2. MISSION & VISION	14
2.3. ABOUT INSTAMART	15
3. MARKET OVERVIEW	18
3.1. GLOBAL GROCERY MARKET	18
3.2. ONLINE GROCERY MARKET	20
4. INS ECOSYSTEM	24
4.1. OVERVIEW	24
4.2. ECOSYSTEM PARTICIPANTS	26
4.3. BLOCKCHAIN & SMART CONTRACTS	30
5. INS PLATFORM	34
5.1. KEY COMPONENTS AND PROCESSES	34
5.2. INCENTIVES FOR SUPPLIERS	44
5.3. INCENTIVES FOR CONSUMERS	44
6. INS APPS & INTERFACES	45
6.1. CONSUMER APPS & WEBSITE	45
6.2. FULFILLMENT APP	46
6.3. WEB INTERFACE FOR SUPPLIERS	47
6.4. WEB INTERFACE FOR DC OPERATORS	48
7. ROADMAP	49
7.1. DEVELOPMENT ROADMAP	49
7.2. GEOGRAPHICAL EXPANSION PLAN	53
7.3. PROJECTIONS	54
8. TOKEN MECHANISM	56
8.1. INS TOKEN STRUCTURE	56
8.2. INS TOKEN USAGE AND ADOPTION	56
9. TOKEN SALE	60
9.1. TOKEN SALE SUMMARY	60
9.3. FUNDS ESCROW	65
10. TEAM	66
10.1. CORE TEAM	67

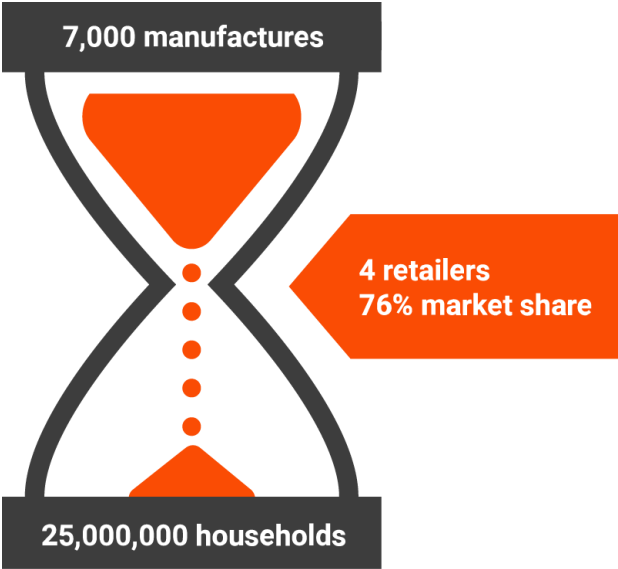
10.2. BOARD & ADVISORS	70
10.3. INVESTORS	71
11. CONCLUSION	72
12. RISK FACTORS	74

1. ABSTRACT

This whitepaper explores global grocery market challenges, a technology paradigm shift offering transformative potential, and the business and technical aspects of the solution INS is developing for capitalizing on this potential. Highlights of the paper follow below:

GLOBAL GROCERY MARKET CHALLENGES

- **Retailers’ abuse of bargaining power** - Over the last 50 years, retail chains have acquired a very high share of grocery revenue and increased influence over suppliers, causing deep impacts on consumers worldwide. Bargaining power has tilted in favor of retailers who dictate what food is grown and how it is processed, packaged, priced and promoted. As an example, in the UK, four retailers serve as the slim conduit for 7,000 manufactures to sell their products to 25 million households¹, which demonstrates how the existence of retailer abuse in the grocery industry has not only been allowed to develop but also to thrive.



* Based on UK figures
Source: Consumers International

¹ Source: Consumers International.

- **Offline shopping obsolescence has given way to new delivery models** - Over the past decade, online grocery shopping has quietly closed-in on the traditional industry. When designed well, online shopping offers a simpler, quicker and more price-competitive services in comparison with those of brick-and-mortar stores. But online groceries still do not address the rampant abuses in the industry by the retailers.

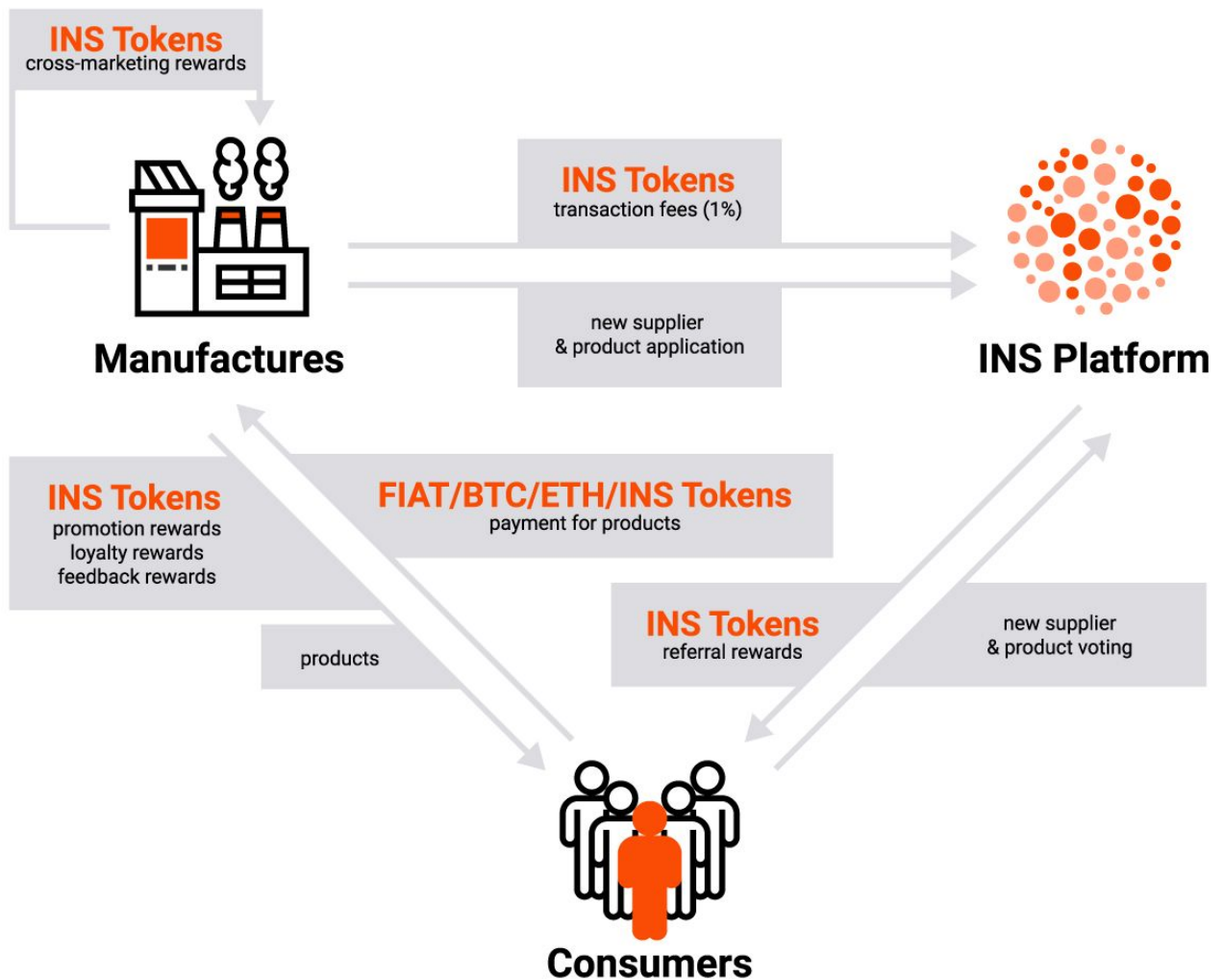
A BOLD VISION AND NEW HOPE FOR AN AGE-OLD CHALLENGE

- **Insidious retailer misconduct calls for a bold vision** - the INS team believes that a decentralized blockchain-powered facilitation consumer-to-manufacturer interaction will allow for a more personalized and trustworthy grocery shopping experience while offering significantly lower prices for grocery goods.
- **Blockchain offers unparalleled opportunities** - INS believes Bitcoin, Ethereum and other blockchain ecosystems will usurp traditional industries, including retail. Blockchain offers a compelling solution to the problem of combining accessibility with privacy and security.

INS' INNOVATIVE SOLUTION AND DISRUPTIVE BUSINESS MODEL

- **INS ecosystem enables direct interaction** - Through INS, consumers will buy grocery goods directly from manufacturers, saving up to 30% on purchases. Manufacturers will be able to offer easily customizable promotion and loyalty programs, and receive direct feedback from consumers.
- **INS tokens facilitate transactions** - Ecosystem participants will use the INS token to transact, eliminating costly retail chains, reducing prices, enhancing security and privacy, and greatly improving user experience.
- **How INS will make money** - The revenues of the INS Foundation will come from the following 2 sources: (1) a small transaction fee as a reward for maintenance of the INS own blockchain and creating smart contracts, and (2) a distribution center fee in the cities where the INS Foundation will establish the physical infrastructure (we plan to put distributions centers into operation on our own in the first 10 cities and then search for independent distribution center operators to expand the ecosystem in other cities).

How the INS ecosystem works



TALENTED A-TEAM WITH UNIQUE INDUSTRY AND FUNCTIONAL EXPERTISE

- **Combined 50+ years of grocery industry track record** - INS was designed by veterans of the grocery industry, using the knowledge and experience acquired at Instamart, an established online grocery company the team has operated since 2013.
- **Invaluable manufacturer relationships and consumer insights** - The team has spent over 4 years building manufacturer relationships and gaining valuable feedback from consumers.

SUPPLIERS ALREADY COMMITTED TO STRONG SUPPORT OF INS

INS has received strong support from some of the largest grocery manufacturers in the world as well as smaller local producers. Below is a list of select companies who have signed non-binding memoranda of understanding with INS regarding future listing on the platform.



2. INTRODUCTION

2.1. GROCERY MARKET CHALLENGES

ABUSES OF RETAIL BUYER POWER

The global grocery industry is dominated by mass-market retail chains. At the national level in many countries, a large share of the grocery market is frequently in the hands of few retailers. While some amounts of buyer power are understandable and simply desirable for competitive advantage, the high level of concentration causes a growing imbalance of buyer power within the grocery supply chain, as discussed below.

- **Exerting buyer power is natural when not abused** - Buyer power is essentially the ability of a buyer to obtain more favorable buying terms than would be possible in a fully-competitive market. It is understandable that any industry participant would seek bigger volumes as a tool for negotiating better prices. But retailers push the limits of what is fair. Grocery retailers are perpetually and aggressively extracting better terms from already squeezed suppliers, going far beyond the benefits a player should receive for attaining economies of scale.
- **Large or small, no supplier has enough power** - Global constituents, such as Procter & Gamble, Nestle, and Unilever, do play a role in the industry and have more negotiating power than small suppliers. Still, these companies simply are no match for the extensive control retailers have on end-customers' power throughout the supply chain. For example, Wal-Mart's sales are approximately 4.5 times greater than those of its largest supplier, Procter & Gamble.² Wal-Mart accounted for 16% of Procter & Gamble sales in 2016.³ Producers of non-branded goods, most notably agricultural producers, have even less access and bargaining power.
- **Retailer buyer abuse extends beyond normal pressure** - The explanation of this pressure is abuse of buyer power. Such power allows retailers to determine what will and will not be stocked, and on what terms, such as sources, quantity, quality, delivery schedules, packaging, returns policy, and above all, price and payment conditions. Indeed, a

² Source: [MIT Sloan Review, Rebuilding the Relationship Between Manufacturers and Retailers](#) (2013).

³ Source: [Procter & Gamble Annual Report](#) (2017).

supermarket company wields an important bargaining chip, namely the threat to stop selling one or more products. When large food retailers purchase at unit prices that are lower than those available to small retailers, the resulting price variances may or may not match differences in the unit costs of supply.

- **Evidence of retail power abuse** - The Competition Commission in the UK, for example, did find that major retailers enjoy a price advantage that exceeds the cost difference. Additional departures from proper retail conduct included: delaying payments to suppliers beyond the terms in the contracts; and changing quantities or product-quality specifications at less than three days' notice, and without paying compensation to supplier.⁴ The figure below offers specific evidence of retail buyer power abuse and lack of adherence to codes of conduct, which was covered in various news outlets.

Recent evidence of retailer abuse and lack of adherence to codes of conduct

Tesco suppliers say retailer worst at following grocery code of practice

Tesco suppliers say retailer worst at following grocery code of practice. Questionnaire reveals 30% of direct suppliers say UK's biggest supermarket rarely complies with industry code.

*The Guardian
United Kingdom*

Competition Issues in the Food Chain: Possible Measures to Address Buyer Power in the Retail Sector

Fair competition in the food retail sector is crucial to ensure producers'/suppliers' equitable access to the distribution chain. The current situation where supermarkets impose unfair sales prices and/or terms to suppliers, adversely affects not only suppliers but also consumers with respect to product prices and choice.

*Trade and Development Board
Switzerland*

ACCC investigates claims Woolworths, Aldi 'off to a bad start' under supermarket code of conduct

The competition watchdog is investigating concerns that Woolworths and Aldi "have not got off to a good start" under the new Grocery Code of Conduct. The Code was set up to ensure retailers deal with their suppliers 'in good faith', after years of complaints from farmers and food manufacturers about unfair treatment.

*ABC.net.au
Australia*

Grocers face price check: Are supermarkets abusing their immense buying power

Peter Freeman, the Competition Commission's chairman, said: "Our inquiry clearly revealed problems that require action and which, if left unchecked, would damage the consumer

*The Independent
United Kingdom*

Supermarkets face large fines for abusing farmers

Supermarkets have been accused of behaving unreasonably when setting prices – and changing the terms of agreements once they have been struck.

*The Telegraph
United Kingdom*

When suppliers are characteristically numbered in the thousands, supermarkets on the fingers of one hand, and consumers in the millions, the imbalance of bargaining power is certainly striking.

⁴ Source: Gordon Mills, Buyer Power of Supermarkets.

RISE OF RETAILERS' OWN BRANDS AND THE LOSS OF INDEPENDENT BRANDS

As retailers acquired increasing presence in the minds of consumers and economic power in grocery markets, it is unsurprising that they have developed their own brands to bolster market share and profits.

- **Retailers now directly compete with their supply chain** - As if the significant imbalance in retail control and power over manufacturers and consumers was not enough, the retailer has a new role. In addition to their traditional role as purchaser, with the proliferation of private label strategies, retailers have become direct competitors of product companies.
- **Private labels becoming more prominent and sustained** - For instance, in Australia, the share of supermarket food sales occupied by retailers' own brands is now estimated at 25%. In the UK, it is estimated by the British Brands Group to be double that.⁵ Manufacturers are in constant need to develop differentiated products to attract customers, an intense challenge when retailers often launch copycat store brand products at the same time as the national brand.⁶
- **Retail profit and cost savings win over supplier relationships** - Although shelf space is finite, branded goods are being increasingly squeezed out by retailers' own brands. It is twice as profitable for retailers to do this. The promotion of their own branded products can be carried as part of their corporate promotional overhead, which implies substantial savings of indirect cost. In addition, the closer control that supermarkets have over their own brand suppliers means that they often achieve lower direct product costs too, and in most cases compromising the quality to increase profits.
- **Yet store brands often command similar prices as national ones** - Retailers' own brands have moved up market into premium and prepared foods and the prices they can command are often not far below those of independent, established brand owners.

Effective measures to prevent unfair commercial practices in the grocery retail industry and the resulting detriments to both consumers and small and mid-scale manufacturers are urgently needed. Remedies should be based on a fundamental principle of fair dealing and should be enforceable and binding.

MAJOR SUPPLY CHAIN INEFFICIENCIES ABOUND

⁵ Source: British Brands Group.

⁶ Source: The Great Supermarket Debate: Suppliers Fight for their Rights (2014).

While smaller producers across the world are being displaced from the store shelves by a relatively small group of large retailers, significant inefficiencies exist in the supply chain.

- **High distances between manufacture and consumption** - It is estimated that the average American meal travels about 1,500 miles to get from farm to plate.⁷ This problem is relevant for world's many countries and might lead to acute financial, ecological and health-related consequences with significant adverse impact in the long-term. Food miles, the distance food travels from the place it has been grown to where it is ultimately consumed or purchased, increase significantly when buyers import food from other parts of the country, region or world.⁸
- **Waste in various areas of the supply chain** - In distribution centers and on grocery store shelves, food is being wasted. Every night, some perishable items such as bread must be thrown out. According to a recent survey, 400 million pounds of food is served by supermarkets, yet nearly a third of it is wasted annually.⁹ In addition to the sheer lack of responsibility, especially when hunger continues to be such a global issue, is the loss of profitability due to the power of retailers' dominating the supply chain simply because they control negotiation discussions. Unfortunately, current retail systems are designed to reduce stock-outs rather than measure and manage food waste. Therefore, managers optimize to ensure food is left over on the shelf.¹⁰

The time has come for connecting consumers directly with grocery manufacturers via a decentralized consumer ecosystem.

⁷ Source: CUESA, [How Far Does Your Food Travel to Get to Your Plate?](#).

⁸ Source: NRDC, [Food miles: How far your food travels has serious consequences for your health and the climate](#) (2007).

⁹ Source: NPR, [Supermarkets Waste Tons Of Food As They Woo Shoppers](#) (2014).

¹⁰ Source: ReFED, [Inventory Management Challenges](#).

2.2. MISSION & VISION

“Our mission is to build an accessible ecosystem enabling consumers to buy directly from high-quality grocery manufacturers at lower prices.”

The INS ecosystem will be a scalable platform that enables consumers to buy best-quality groceries directly from manufacturers at lower prices with convenience.

We have validated consumer interest, received support from manufacturers and developed the roadmap to execute on this vision. The INS team has deep knowledge and 50+ years of collective experience in the grocery industry, obtained while building Instamart, one of the leading grocery delivery services in Russia.

The INS team shares a common vision of the future of the grocery industry:

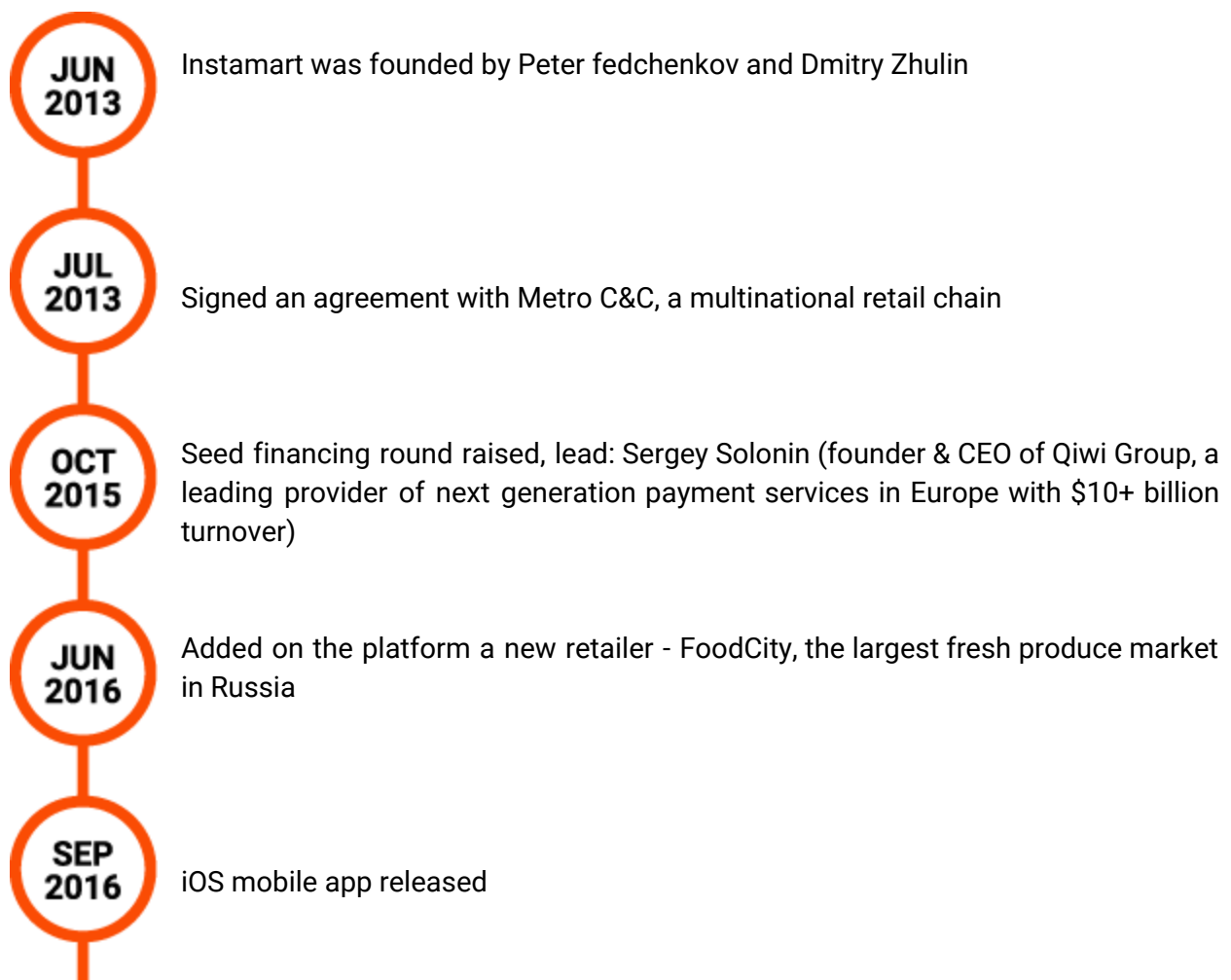
- **Groceries are overpriced.** We know how to make a positive impact in the lives of people across the world, given that groceries account for up to 50% of a consumer’s wallet.
- **Manufacturers struggling to get direct access to consumers.** While building Instamart, we had received and continue receiving hundreds requests every month from manufacturers that can not break through on store shelves in retail stores, while having excellent products that would have received a strong demand from consumers.
- **Supply chain in grocery retail is obsolete.** Wholesalers and retailers developed in the second half of 19th century should be replaced with technology in the 21st century.
- **We believe in the power of decentralization.** Consumers and manufacturers deserve the free choice that is not influenced by retailers and the way they conduct business.
- **Disrupting with blockchain is the paradigm shift.** While the idea of disintermediating the retailers is not new, the advent of smart contracts and blockchain will help us make it a reality.

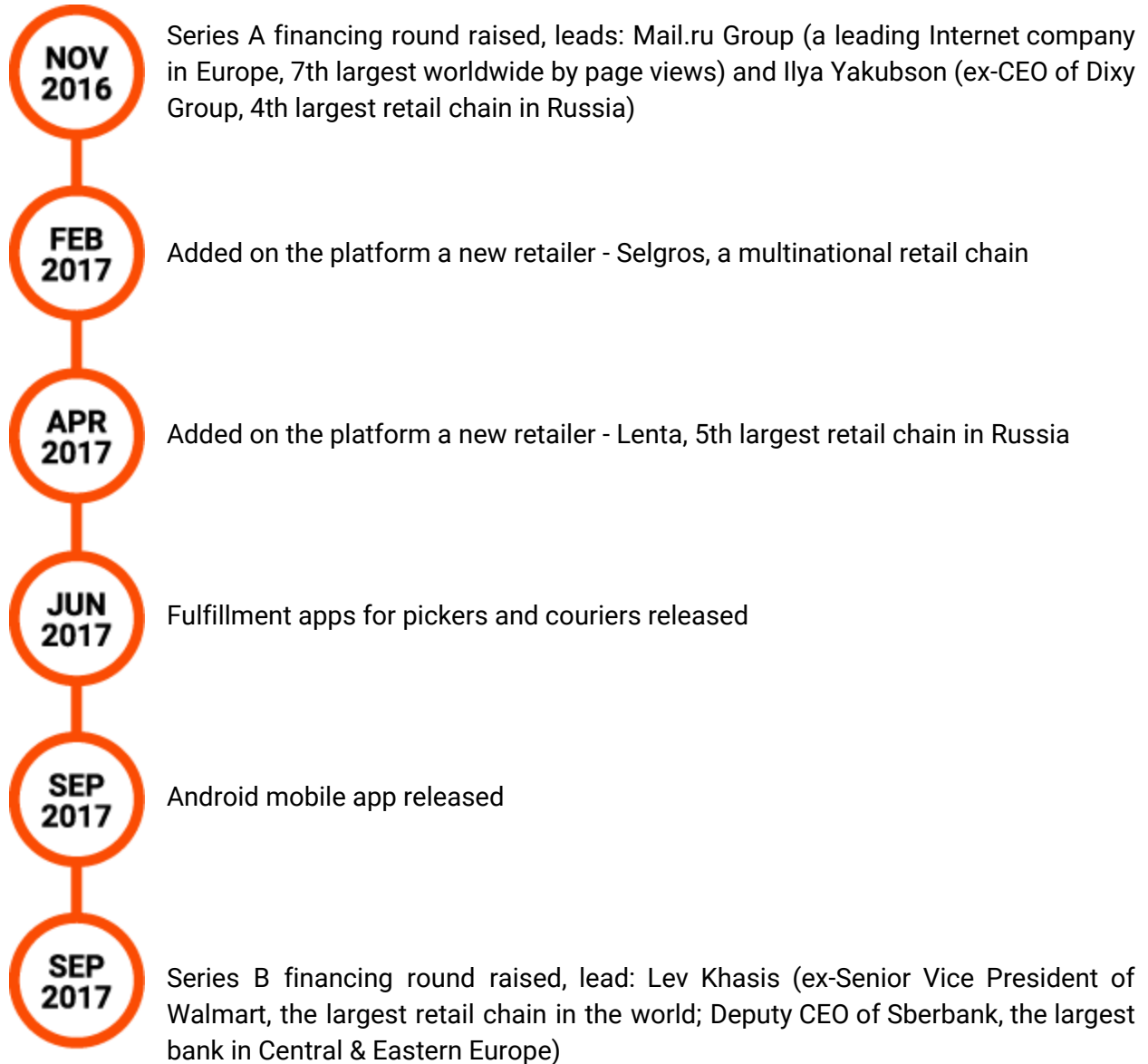
2.3. ABOUT INSTAMART

The INS team gained a first-hand and practical experience in the grocery industry while developing and growing Instamart, one of the leading grocery delivery companies in Russia. Instamart employs over 200 people, has signed contracts with the largest retailers in the country, and works with the leading grocery manufacturers.

Four years of operating experience in the grocery retail sector helped the Instamart team to identify major inefficiencies and abuses in the industry current construct. The founders see a large opportunity to disrupt the global grocery retail market via establishing a decentralized and fair ecosystem that directly connects manufacturers and consumers.

HISTORICAL TIMELINE





CUSTOMER EXPERIENCE

Instamart customers can choose a retail store for shopping and order same-day delivery of groceries via the website (desktop and mobile) or apps (iOS and Android). Instamart has integration with retailers in terms of pricing and assortment on a store-by-store basis. The database is updated daily to feature relevant in-store product offerings. The prices are the same as in store with no markup. Instamart's customers comprise corporations, including some of the leading international companies, and predominantly middle-class individuals.

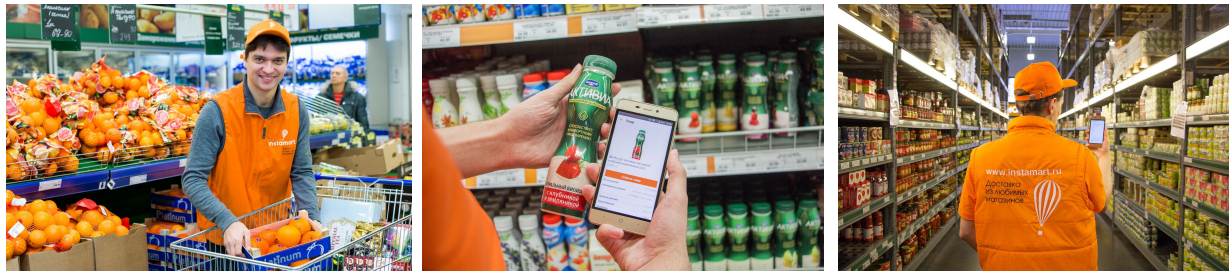
Instamart's select corporate customers



OPERATIONS

Instamart fulfills orders directly from store shelves. Our pickers are trained to select the best produce and use a proprietary mobile app to increase picking efficiency.

Instamart's Staff in Action



By operating in multiple stores within city limits, Instamart can deliver from the store that is the closest to the customer, thus providing fast, inexpensive and high-quality service.

Instamart has signed contracts with leading European and national retailers and developed direct relationship with manufacturers, including the world's largest multinational FMCG companies. The company has launched a number of marketing projects aimed at direct communication between the brands and consumers, including ad banners, sponsored deliveries, traffic generation, sampling and co-branded packaging.

Select FMCG partners



INSTAMART FINANCIAL FORECAST

Instamart's business has four years of successful operating history. Revenue growth has demonstrated a 400%+ CAGR in 2013-2016 with plans to reach a \$27 million revenue in 2018 and more than \$2 billion by 2022.

Instamart Financial Forecast 2017-2022

	2017	2018	2019	2020	2021	2022
Revenue, \$m	6	27	105	347	945	2,048
growth, %	414%	350%	289%	230%	173%	117%
EBITDA, \$m	(2)	(3)	(2)	3	21	81

3. MARKET OVERVIEW

3.1. GLOBAL GROCERY MARKET

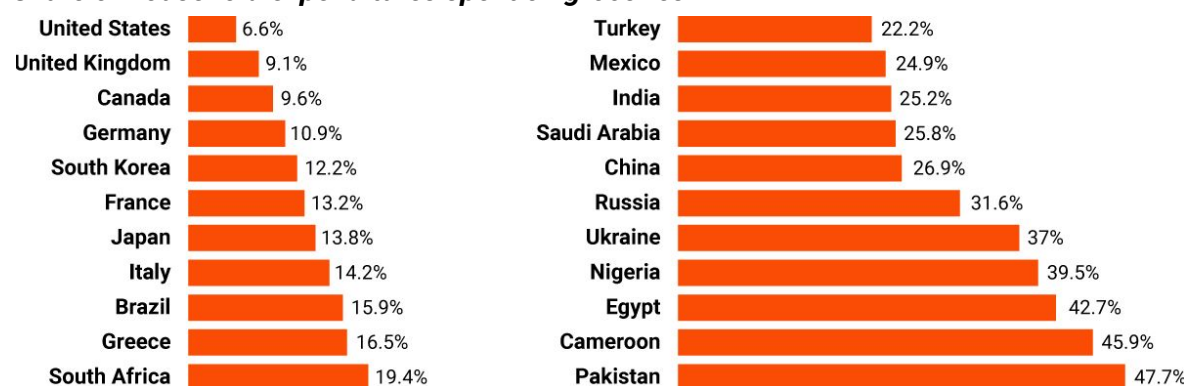
- ❖ The grocery market is one of the largest consumer markets in the world: it is expected to reach \$8.5 trillion by 2020 with up to 50% share of a customer's wallet
- ❖ Grocery retailers have acquired a dominant market share and high concentration: up to 90% of the market in many countries is controlled by a handful of retailers
- ❖ The grocery industry is reaching a digital tipping point, with much of its growth expected to come from online

A VERY LARGE MARKET WITH EXTENSIVE IMPACT

The global grocery industry was valued at \$5.6 trillion in 2013 and forecasted to grow at a CAGR of 6.1% from 2016 to 2020, reaching an estimated \$8.5 trillion in 2020.¹¹ The grocery market is a defensive one which means that it tends to stay stable in good and bad economic times, given there will always be a demand for food.

One of the biggest segments of retail and comprising a significant share of the consumer's wallet, the industry has a deep impact on grocery sector stakeholders, particularly manufacturers and consumers. As an example of the consumer impact, the figure below shows the portion of consumers' household spending that food comprises in a variety of countries.

Share of household expenditures spent on groceries¹²



¹¹ Source: Persistence Research, [Food Retail Market Will Reach \\$8,541.9 Billion Globally in 2020](#) (2014).

¹² Source: USDA, [Economic Research Service](#) (2012).

HIGH MARKET CONCENTRATION

The table below highlights the high concentration of grocery markets throughout the world. Top grocery retail corporations comprise an incredibly high share of the market. For example, in Finland, 88% of the grocery market is controlled by the nation's top three retailers. As the market becomes more concentrated, prices of grocery products rise.

*Selected national food market concentration ratios*¹³

Country	Percentage of national grocery market controlled by top retail chains	Number of top retail chains in the country
European Union		
Austria	82%	3
Belgium	71%	5
Denmark	80%	5
Finland	88%	3
France	65%	5
Germany	85%	4
Greece	50%	5
Italy	40%	5
Netherlands	65%	5
Portugal	90%	3
Spain	70%	5
UK	76%	4
Rest of World		
Australia	71%	2
Canada	75%	5
Norway	81%	3
Switzerland	76%	3

The grocery industry is reaching a digital tipping point, with much of its growth expected to come from online. In fact, some FMCG brands are already claiming 20-50% of sales from online purchases.¹⁴ A combination of factors is responsible for this growth - expanding online offerings, new technologies, increased efficiencies and consumer preferences for convenience among the most important ones.

¹³ Source: Consumers International, Planet Retail, Nielsen.

¹⁴ Source: Dunnhumby (2014).

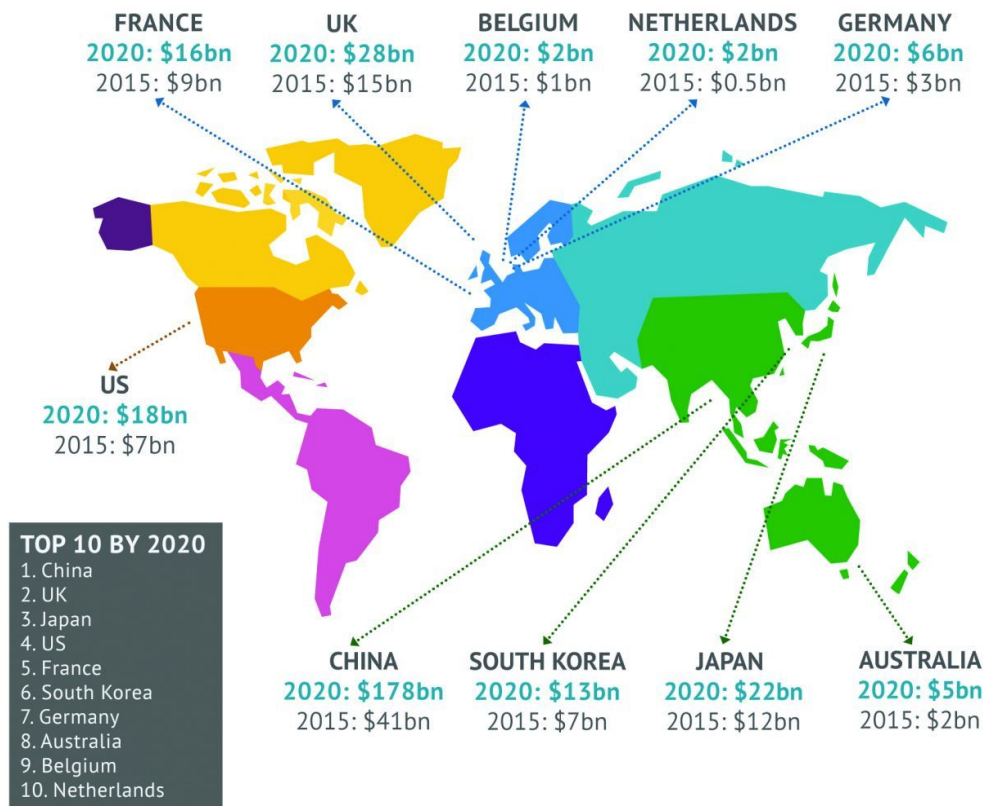
3.2. ONLINE GROCERY MARKET

- ❖ Online grocery, being the target segment for INS, is expected to grow from \$98 billion in 2015 to \$290 billion in 2020 (IDG estimates)
- ❖ Grocery is the last major consumer market moving rapidly into online, offering tremendous opportunities for those who will lead this shift
- ❖ INS is well equipped to lead in the online grocery segment and is addressing key consumer demands - cheaper prices, higher convenience, better quality, and special promotions

ONLINE GROCERY WILL EXPLODE

The global online grocery market increased by 16% in 2016. IGD projects double-digit annual growth rates for online grocery in largest markets by 2020. Top 10 global markets alone is expected to explode from \$98 billion in 2015 to \$290 billion in 2020.¹⁵

Top 10 online global grocery markets and forecast to 2020¹⁶



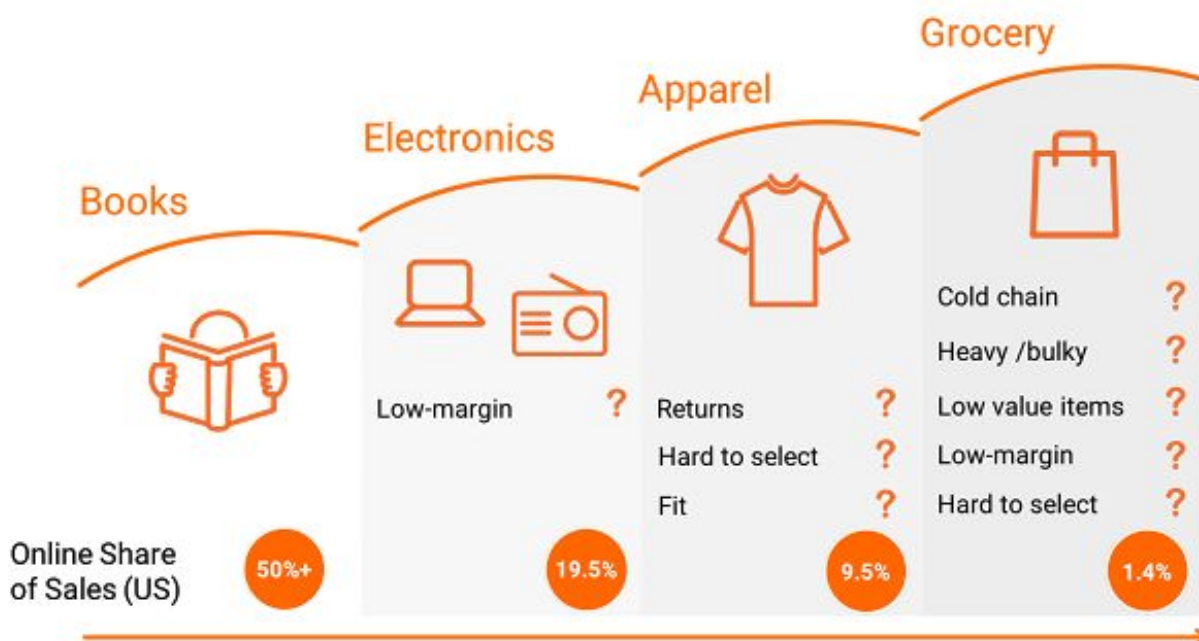
¹⁵ Source: IGD, [Top 10 Online Global Grocery Markets and Forecast](#) (2015).

¹⁶ Ibid.

ONLINE GROCERY PENETRATION IS LOW CURRENTLY BUT WILL GROW FAST

Grocery is one of the last major consumer markets moving rapidly into online. Historically, players have been slow to address the online grocery challenges, however, the advent of mobile technologies and application of blockchain will spur innovation and support growth.

eCommerce Category Expansion Timeline¹⁷



DEMAND AND SUPPLY DRIVERS

Consumers are becoming increasingly time-starved. The rapid growth in online grocery retail can be attributed to various factors such as demographic profile of consumers, number of working women, good internet connectivity, rising usage of smartphones, convenience, etc. Traditional in-store buying of grocery is becoming more cumbersome given the fast pace of lives, especially in urban areas. Moreover, buyers are overcoming the biases of wanting to touch and see food and grocery products before buying. Consumers, pressed for time, are looking for options which offer increased convenience and save time. Online grocery buying offers exactly that and hence is gaining popularity across consumer segments.

¹⁷ Source: Instamart analysis, company information, [CBRE E-Commerce Sales by Retail Category](#) (2015).

The following secular trends are helping further proliferation of online grocery:

Demand drivers

- On-demand economy expectations
- Time-starved lifestyle in large cities
- Worsening traffic conditions
- Growing smartphone usage
- Growing middle class in large urban areas

Supply drivers

- Advent of mobile technology
- Automated fulfillment solutions
- New marketplace model that requires less capital expenditure
- Crowdsourcing economy driving affordable, quick delivery

Price, quality of products, convenience and special promotions are the most important drivers that influence consumer behavior.¹⁸

Most important grocery purchasing decision drivers for consumers (source: Nielsen)¹⁹



The INS ecosystem will enable consumers to buy high-quality groceries at cheaper prices, thus driving consumers towards buying online with convenience. Manufacturers will be able to provide special promotions directly to consumers via the INS Platform.

¹⁸ Source: Nielsen, [The Future of Grocery](#) (2015).

¹⁹ Ibid. Global average.

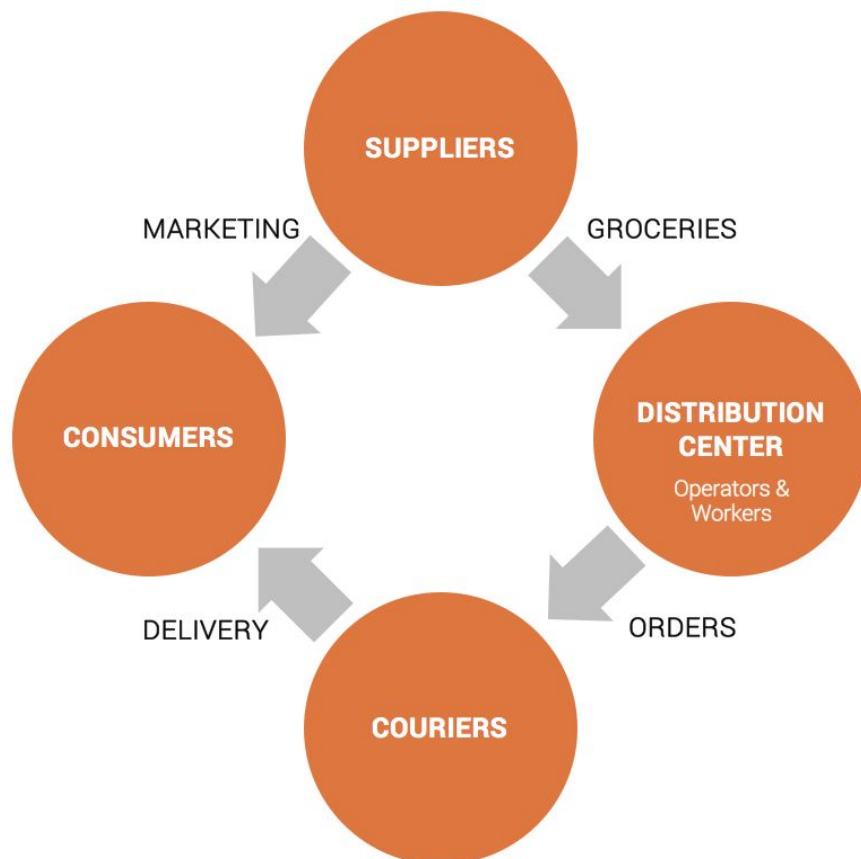
4. INS ECOSYSTEM

4.1. OVERVIEW

The INS ecosystem will become the first global decentralized grocery marketplace where consumers will be able to buy products directly from manufacturers. The ecosystem builds a cooperative operating model where consumers enjoy low transparent prices, manufacturers compete for consumers and interact with them directly, and all other parties that facilitate the fulfillment process are fairly compensated.

The ecosystem is a four-sided marketplace, however none of its parties interact with more than two other participants, therefore making it simple and efficient.

The INS ecosystem marketplace model



Customer proposition of the INS ecosystem vs. Retailers

	The INS ecosystem	Retailers
Price	✓✓✓	✓
Quality	✓✓✓	✓✓
Convenience	✓✓✓	✓✓
Special promotions	✓✓✓	✓
Assortment	✓✓✓	✓✓

The INS Foundation, incorporated as a BVI company, is the official entity that creates the INS token (“INS”), platform and technology. The INS Foundation is focused on releasing open source cryptographic technologies that enable operation of the INS ecosystem.

The revenues of the INS Foundation will come from the following 2 sources:

1. Transaction fee of 1% of the total transaction volume as a reward for maintenance of the INS own blockchain and creating smart contracts. The fees will be charged directly at the smart contract level in INS tokens.
2. Distribution center fee in the cities where the INS Foundation will establish the physical infrastructure. We plan to put distributions centers into operation on our own in the first 10 cities and then search for independent distribution center operators to expand the ecosystem in other cities .

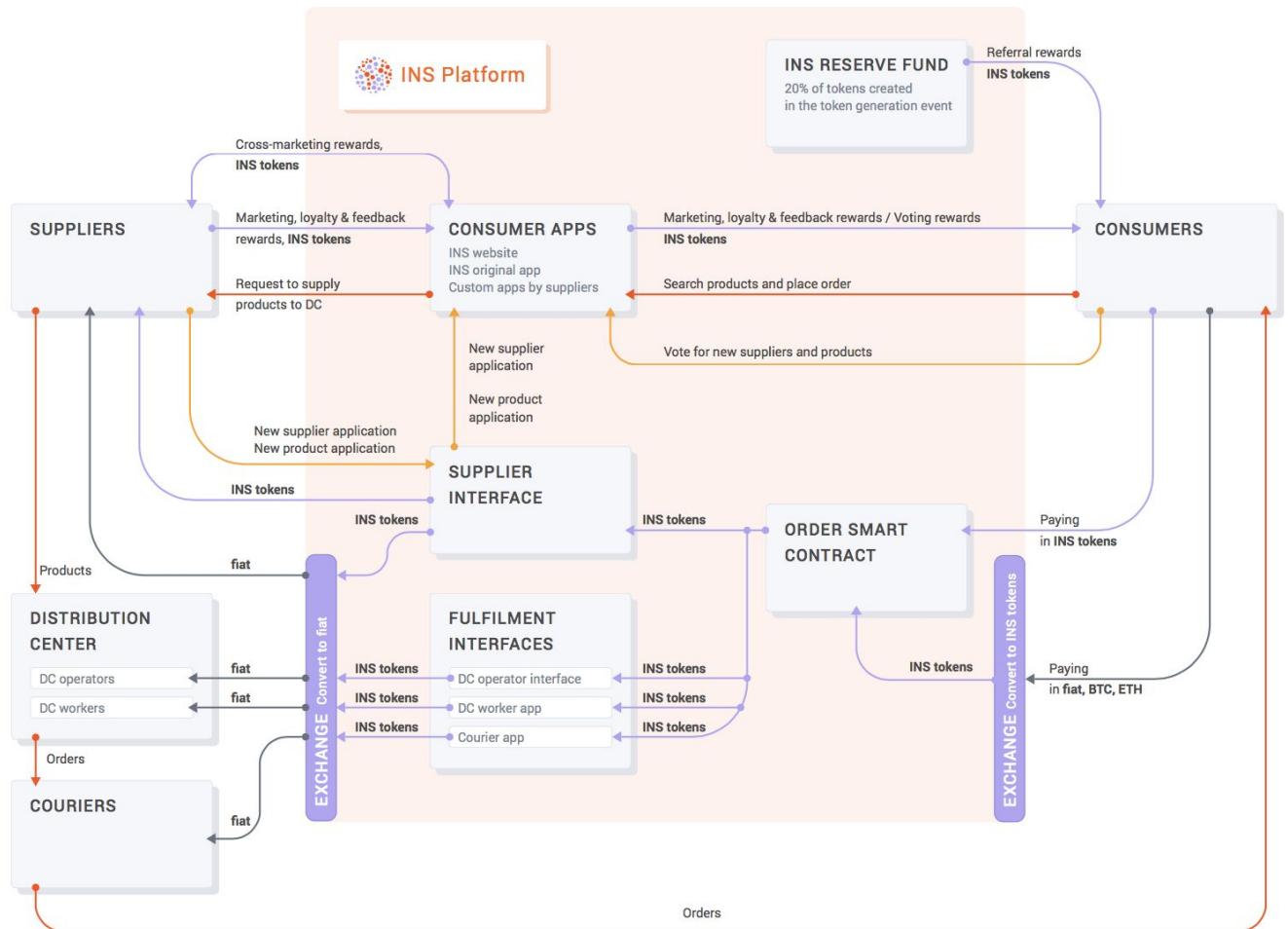
To become an ecosystem participant, the user creates an account on the INS Platform. During the registration, the system will create a user profile and a wallet. Each participant of the ecosystem will be provided with a wallet on a full-time basis. The wallet will preserve all data in our decentralized database and interact with other parties, utilizing smart contracts. Users can use their credit cards to buy INS tokens on exchanges for fiat. If a user has some other cryptocurrency, the system will allow an instant exchange of the user’s tokens for the INS tokens via existing exchanges, such as Coinbase, Kraken, Poloniex, etc. Standard regulatory and anti-fraud measures could apply to this stage.

4.2. ECOSYSTEM PARTICIPANTS

The ecosystem will be built in accordance with a scalable, decentralized approach that ensures the stability and sustainability in the long term.

The ecosystem will involve the following participants, which will participate as depicted in the next diagram:

- The INS Platform
- Suppliers
- Distribution center operators and workers
- Couriers
- Consumers



THE INS PLATFORM

The INS Foundation is the official entity that creates the INS token (“INS”), model and technology. The INS Foundation is focused on releasing open source cryptographic technologies that enable operation of the INS ecosystem.

The INS Platform is a decentralized system that allows manufacturers to join the ecosystem, publish their products for sale, carry out promotion and loyalty campaigns, and get feedback from consumers, enables consumers to order those products, and facilitates the order fulfillment process.

The INS Foundation roles include:

- INS token creation and the token launch to fund development and expansion of the ecosystem
- Establishment of a decentralized, fair and secure model for order execution over the INS ecosystem
- Development of smart contracts to run all stages of the order payment and fulfillment process
- Release of the INS customer website
- Release of the INS customer app as an open source implementation to allow consumers to make orders and make this app customizable for suppliers
- Release of the INS fulfillment app for distribution center workers and couriers to automate the order fulfillment process
- Release of the web-based interface for suppliers and distribution center operators
- Creation of an effective incentive model for all parties to join the INS ecosystem
- Development of an active marketing campaign to ignite initial traction
- Elaboration of the ecosystem’s regulatory aspects

SUPPLIERS

Suppliers are companies or individuals in the business of fresh produce, groceries and consumable household items. They range from local farmers or cooperatives to large multinationals, such as Procter & Gamble, Unilever, Coca-Cola, etc. Suppliers are responsible for publishing products for sale on the INS Platform. Suppliers can use the original INS Consumer app or tailor it to create a specified user experience, based on the open source implementation provided by the INS Foundation.

Supplier roles include:

- Publish products on the platform

- Provide users with access to the network through the original INS app or a custom branded version of the app
- Deliver products ordered by consumers to distribution centers
- Promote the INS ecosystem by bringing traffic via promotions of derived apps to its customers

Suppliers may integrate products published by other suppliers in their apps to enjoy cross-sale fees.

CONSUMERS

Consumers are individuals or companies that want to buy high-quality groceries at cheaper prices. Orders can be placed via the INS website, INS app or custom apps derived from the app reference implementation.

Consumer roles include:

- Search products listed by suppliers, make orders and pay for them
- Vote for new suppliers and products
- Receive promotion and marketing rewards
- Participate in feedback requests and receive feedback rewards
- Receive referral rewards

DISTRIBUTION CENTER OPERATORS

Distribution center providers are owners, lessees and operators of existing warehousing or sorting facilities. Distribution center operators lease distribution center space where distribution center workers take products delivered by suppliers and then assemble orders.

Distribution center operator roles include:

- Provide a warehouse space
- Allow distribution center workers to perform their duties

To speed up adoption, develop and polish scalable business processes and demonstrate the attractiveness of being a distribution center operator to the ecosystem, the INS Foundation will create a basic network of distribution centers in 10 cities. The INS Foundation will act as one of distribution center operators in these cities and will seek to engage independent distribution center operators to join the ecosystem. None of distribution center operators, including the INS Foundation itself, will have exclusivity to operate in any single city. That creates a natural

competition to ensure lowest possible prices for consumers, fair return to distribution center operators, and consistent quality of service.

DISTRIBUTION CENTER WORKERS

Distribution center workers, employed by a distribution center operator or acting as independent contractors, will follow instructions received via the INS fulfillment app to:

- Collect products delivered by suppliers to distribution centers
- Assemble products into orders
- Pass assembled orders to couriers

The INS Foundation will hire a small number of distribution center workers in the start of the rollout to polish the order fulfillment process for the benefit of the community. The INS Foundation will seek to attract independent workers to join the ecosystem.

COURIERS

Couriers, employed by a courier company or acting as independent contractors, will follow instructions received via the INS fulfillment app to:

- Collect assembled orders in distribution centers
- Deliver orders to consumers

The INS Foundation will hire a small number of distribution center workers in the start of the rollout to polish the order fulfillment process for the benefit of the community. The INS Foundation will seek to attract independent couriers and courier companies to join the ecosystem.

4.3. BLOCKCHAIN & SMART CONTRACTS

Although the idea of connecting manufacturers directly with consumers and shortening grocery supply chain might not be new, it is only with the advent of blockchain and related technologies that it could be practically implemented.

We are developing INS as a very high-load system. At the moment, we are reviewing several platforms as a possible base for INS: Ethereum Raiden, EOS, Tezos, and Exonum.

The main focus is on performance, in which we seek:

- Smart contracts support
- Predictability
- Stability
- Ease of use

The market potential for the INS ecosystem consists of billions of users, each of them making dozens of orders per year.

We plan to use the most proven and scalable open source technologies and constantly monitor alternative technical implementations. To ensure full transparency, blockchain technology is used as a decentralized data storage unit.

As the existing blockchain platforms such as Ethereum have inherent limitation in transaction bandwidth (currently limiting to a dozen tx/sec), and prospective platforms and frameworks are only in the development stage, we also consider designing and developing our own INS blockchain platform in the future, where nodes are selected from a semi-trusted set of supporters. Given the trust in the nodes, we will implement one of much faster consensus algorithms from the BFT family (HoneyBadgerBFT/Zyzyva/others), enabling up to thousands transactions per second. A smart contract virtual machine will run on top of the consensus algorithm, with Ethereum's EVM being a natural choice. The state of the INS blockchain will be regularly anchored to the most popular smart contract ledgers (at least ETH and ETC) so that proofs of state and proofs of transaction (within INS) can be verified by Ethereum smart contracts (like it is currently done in BTCRelay or will be done in the future in Plasma). Common optimization techniques such as state sharding and payment channels will be also implemented.

The following blockchain applications will be used in INS:

- Smart contracts
- Payments

- Real-time tracking
- Marketing campaigns
- Rating system

SMART CONTRACTS

The INS platform will provide to its participants a number of smart contract templates that can be used to facilitate the sale mechanism. Besides the regular ERC-20 token contract for INS tokens, the following smart contracts will be widely used in the INS ecosystem, even though not all of them will be deployed in the first stage:

- Order contracts are created by suppliers to facilitate and track the product order from the payment to delivery.
- Reward contracts will be created by suppliers to incentivise new customers via promotions, reward loyal customers, and stimulate friendly suppliers in cross-marketing events.
- Voting contracts will be created by suppliers and INS platform to collect consumer's opinion on new products and suppliers.

More details follow in the [section 5, describing the INS platform](#).

PAYMENTS

The current financial system causes money to bounce around a lot of companies and includes middlemen just so it lands from a customer to a merchant. One of the big advantages that the blockchain brings to the table is that the credit and debit card fees disappear. The amount of such fees is ~3% depending on the country and type of transaction. That's a tax you pay when you buy and sell anything on the internet today. That may not sound like much but, in a game where competitors are bleeding each other dry and the margins are a few percentage points, that is a significant amount. By using blockchain we immediately significantly decrease these costs and pass the savings to all the parties, including the consumers. The well known drawbacks of blockchain payments – namely, difficult onboarding, scalability, and privacy issues – will be mitigated by various token acquisition mechanisms, switch to more effective ledgers, and private payment mechanisms (Zcash and its relatives) – respectively.

A full suite of platform functions designed to protect suppliers and consumers by reducing the chances for fraudulent transactions will be developed for the INS ecosystem. A tokenized ledger will provide a complete token-based system, similar to “real” money where tokens are sent and exchanged at different times and for different reasons, based on predefined rules and events. INS tokens will be used within the INS ecosystem to transact with the different events that happen. Blockchain eliminates the role of the central authorizing body and simplifies the whole

process of payment. As a result, the transaction can take place in almost real-time thereby lowering the operational cost.

Another great property of the blockchain is smart contracts, that makes certain guarantees that money moves hands only when a predefined event has happened such as when a product bought online has been delivered. Smart contracts will be applied to facilitate the trade by significantly reducing counterparty risk and the costs of transacting by minimizing the human factor in the process. A software protocol automates and self-executes an action when certain conditions are met.

When the order is paid by a consumer, the funds stay inside the smart contract and await his confirmation of the successful order completion. The confirmation will be delivered as a digital signature made by the private key used to initiate the order and stored in the wallet. The complaint mechanism is available to handle disputes, it will be described below.

REAL-TIME TRACKING

Real-time product tracking technology provides visibility of product or order location and status to customers, suppliers and other ecosystem participants during the fulfillment process. Every time a product or order changes hands, the transaction will be documented, creating a permanent history from manufacture to sale. This will reduce time delays, added costs and human errors that plague transactions today, automate inventory control, and streamline distribution processes, but errors to some extent are possible since grocery products are not digital, the blockchain records of their track is inevitably post-factum.

Blockchain enables an efficient "pull" system that would reduce inventories and out-of-stock for manufacturers and would drive down the costs.

Blockchain technology will improve the following tasks:

- Recording the quantity and transfer of products and orders as they move between supply chain nodes
- Tracking orders, order changes, receipts, shipment notifications, and other trade-related documents

MARKETING CAMPAIGNS

Building marketing programs on the blockchain is massively disruptive. The rewards received through these programs will be like cash directly to a digital wallet. Suppliers will be able to directly reward their loyal customers with tokens that can be spent immediately. The network effects from this will be massive as customers will be highly motivated to spend their tokens. Additionally, there is almost no way how suppliers could interact directly with consumers and offer them loyalty programs now.

Blockchain will provide instant redemption and exchange for multiple loyalty or promotion programs on a single platform. With one wallet for tokens, consumers would not have to hunt for each program's options, limitations, and redemption rules.

RATING SYSTEM

The rating system will be used to collect, maintain, and distribute the rating scores of the ecosystem participants which can then be queried by those who might need them. These rating scores can be used as a basis for establishing initial trust among participants.

Every participant of the INS ecosystem will have a rating score derived from the quality of products, services and behavior. Consumers are not obliged to have a rating for privacy issues; however, they are always able to join the rating system and accumulate positive ratings like in regular loyalty programs. The ratings accrued by consumers will not be public. Moreover, in order to keep privacy and reduce personal data leakage the other participants will not learn the exact consumer rating, nor (in general) the rating will be provably shown without referring to the exact consumer (when possible). The mechanism will involve anonymous credentials as zero-knowledge proofs of signed attributes similarly as it will be done in the Sovrin identity ledger.

5. INS PLATFORM

The INS team's experience with Instamart gives us an intimate understanding of the specifics of UI/UX in online grocery, search and filtering attributes, content operations and other aspects of a seamless services the INS Platform will be facilitating among the parties involved.

This section describes the processes assuming Ethereum as the primary smart contract platform. The same processes will be carried in the next phases on the INS own blockchain or any other contract platform, but details of the transition are beyond the scope of this document.

5.1. KEY COMPONENTS AND PROCESSES

PRODUCTS

Products in the consumer markets constitute the basic item that actions revolve around. A product is the example of an item that a supplier is willing to sell to consumers. For example, a 0.5L Coca-Cola bottle. To make it simple and convenient, products on the INS Platform are required to have several defined parameters, such as category assignment, name, volume, price, description, ingredients, etc. that will make it easy for consumers to find and choose products for ordering.

To empower consumers, we will introduce the voting mechanism to approve new suppliers and products. In the first stage the voting will be conducted on the INS platform, and later will be conducted on a smart contract. The reason is that a proper decentralized voting requires a heavy cryptographic protocol, which might be too high on the learning curve for the participants to work with.

NEW SUPPLIER VOTING

The voting mechanism empowers customers with ability to encourage good and reliable suppliers to join the ecosystem and allows consumers to show a socially responsible behavior.

1. Suppliers fill out a detailed supplier application form (name, detailed description, city where wants to sell, description of best-known products, production facilities, certificates, accolades, etc.).
2. Consumers for voting are selected randomly to prevent suppliers from cheating and creating fake accounts to go through voting. The selection is taken either on the INS platform among those registered and agreed to vote, or in a voting smart contract. In the latter case, a consumer must provide a privacy-preserving proof of residence issued by a certified entity. Consumers vote for or against and can also put a feedback or question to the supplier that it can respond to. The voting period ends in 2 weeks or upon reaching the vote number threshold (~1000 votes, depends on city and popularity of the INS ecosystem in this city).
3. Depending on the voting results, the supplier is either approved or declined. If approved, the supplier can start submitting new products for approval. If declined, the supplier can re-apply not earlier than in 1 month.

NEW PRODUCT VOTING

The voting mechanism empowers consumers with ability to vote for products they wish to be listed and available for purchase and allows consumers to show a socially responsible behavior. Suppliers that were approved by consumers can publish new products that should also go through the voting process. We expect to see many suppliers focusing on different niches.

1. A supplier fills a detailed product application form (name, description, price, ingredients, promotion & loyalty rewards, etc.). It can be a single product application or a group application if there is a product line (e.g. Coca-Cola in different bottles/cans - 0.25, 0.33, 0.5, 1, 1.5, and 2 liter).
2. Consumers for voting are selected randomly to prevent suppliers from cheating and creating fake accounts to go through voting. The selection is taken either on the INS platform among those registered and agreed to vote, or in a voting smart contract. In the latter case, a consumer must provide a privacy-preserving proof of residence issued by a certified entity. Consumers vote for or against and can also put a feedback or question to the supplier that it can respond to. The voting period ends in 1 week or upon reaching the vote number threshold (~100 votes, depends on city and popularity of the INS ecosystem in this city).

- Depending on the voting results, the product is either approved or declined. If approved, the supplier can start selling it. If declined, the supplier can re-submit the product for voting not earlier than in 1 month.

PRODUCT ORDERING

Consumers choose products to buy, add delivery details, and pay in fiat, BTC, ETH or INS tokens. Depending on the payment method, consumers may pay different prices and have or do not have access to rewards.

Payment method	Processing approach	Prices	Access to rewards
FIAT (bank cards online)	Money is debited, exchanged to INS tokens, put in a smart contract, and then tokens are released upon a successful order completion.	general prices + ~3% card fees	No
BTC, ETH	Bitcoins or Ethers are exchanged to INS tokens and put in a smart contract, released upon a successful order completion.	general prices + transaction fees (e.g. Ethereum gas price)	No
INS tokens	INS tokens are put in a smart contract and released upon a successful order completion.	general prices minus 5% (manufacturers accept this discount as one of the ecosystem rules)	Yes

Payments in fiat, BTC and ETH are handled via existing exchanges (Coinbase, Poloniex, Kraken, etc.) and exchanged to INS tokens. The tokens are locked in a delivery smart contract until the order is delivered to the consumer.

A consumer can order products using the official INS website or app or a derivation of this app released by a specific supplier. The main purpose of this app is to abstract the technical details of the process and provide an easy and user-friendly mobile app with minimal friction and a great user experience.

PRODUCT SEARCH

The decentralized file storage network is used to maintain up-to-date databases of products listed by suppliers. Consumers use the app to sort products and choose those they want to buy. Suppliers may distribute proprietary apps derived from the reference implementation, in which they can choose specific sorting methods and filters for products.

AI algorithms will be applied to gather detailed data on the whole customer experience: what consumers look at, in what order, for how long, on which day, which questions they might have, what they eventually buy. This data can then be used to improve this experience to make it easier, more efficient, more engaging, and more adapted to personal needs. In order to protect user privacy, differential privacy techniques will be used whenever possible.

LOYALTY REWARDS

Loyalty rewards are paid in INS tokens. Consumers are eligible to receive loyalty rewards only if they pay for orders in INS tokens. Since the token payments are processed by smart contracts, it is easy to prove (even in zero-knowledge) that a consumer is eligible for a reward.

Suppliers who wish to encourage consumers to buy more can use the following loyalty reward instruments:

LOYALTY REWARD TYPE #1 - ORDER REWARDS

Order rewards depend on the amount of products bought in the current order made by a consumer.

How it works:

- 1) The more you buy - the more is your discount on the supplier's products.
- 2) Special limited time discounts on selected products.

Examples:

- 1) Buy products from Pepsico for \$10 and get a 1% reward (in INS tokens), \$20 - 2% reward, \$30 and above - 3% reward.
- 2) Buy selected products from Coca-Cola during the next 24 hours with a 15% discount.

LOYALTY REWARD TYPE #2 - CUMULATIVE REWARDS

Cumulative rewards are paid to consumers depending on amount of products purchased during a period of time (month, quarter, year) from a specified supplier.

How it works:

The more aggregate amount purchased from a specified supplier - the more a consumer's additional discount.

Example:

Buy for \$100-500 from Unilever during a month and get an extra 1% discount, \$500-1000 - extra 2%, \$1000 and above - extra 3%.

Both instruments (order rewards and cumulative rewards) can be easily coded in a smart contract, which accepts reward funds from the supplier and distributes them to those who provide proofs of eligibility. The proofs are linked to consumer wallets and certify the order amount, time, frequency, or any combination of those.

PROMOTION REWARDS

Suppliers can provide consumers with a promotion reward in order to incentivize them to make an order. Consumers can spend promotion rewards to order products. Promotion reward is given in INS tokens. The provider can set the expiration date. The credited INS tokens will return to the supplier's wallet address unless used for ordering before the expiration date.

The promotion credit mechanism is implemented as an INS promotion smart contract, which holds a list of eligible consumers and credit amounts. A supplier pre-fills the contract with all the details and deposits tokens. Tokens from this smart contract can only be used to buy products from the collection defined by the supplier.

Example:

Nestle decided to promote its new 3 cereals recently published on the platform and sent 10 INS tokens to all users in London who didn't buy any products from Nestle yet. These tokens are locked to purchase only these 3 new types of cereal by Nestle by Londoners. A smart contract releases tokens to any user who provides a "being Londoner" proof, created as a result of a previous order to London or being an proof-of-geography from a third-party identity service

CROSS-MARKETING REWARDS

Cross-marketing rewards are paid by a supplier to other suppliers for generating revenues via publishing and selling its products in their custom apps. A supplier sets the amount of cross-marketing reward in a reward smart contract, where the product details and reward rules are specified. The cross-marketing mechanism intends to incentivize suppliers to share their

own traffic with products from other suppliers and help their consumers discover more products if the collection of self-published products does not suffice.

How it works:

Supplier A sets a cross-marketing reward percentage that implies the portion of revenue it wishes to share with other suppliers for generating orders for its products. Supplier B developed a custom app (based on the INS reference implementation) and added products from Supplier A to the assortment. Supplier A will pay the defined percentage of all revenues generated by those who ordered products from Supplier A via the app developed by Supplier B.

Example:

Huggies produces baby diapers and sets that it can share 5% of all revenues coming from other suppliers' apps. Gerber, a baby food producer, developed an app and decided to expand the assortment by adding diapers from Huggies. Then, if a consumer purchases via the app products from Huggies, then Huggies pays 5% of all revenues to Supplier B as a cross-marketing reward in INS tokens.

The cross-marketing mechanism assures the consumer remains in the supplier's app and eliminates the risk of losing them. Suppliers may also use the traditional affiliate programs to incentivize traditional affiliates to promote their apps. These programs are held separately and have no direct involvement of the INS platform.

REFERRAL REWARDS

The INS Foundation creates the INS Reserve Fund as the part of the token generation event with the primary goal to use these tokens to provide referral rewards to consumers that help increase popularity of the INS ecosystem and attract new consumers to join and make orders.

How it works:

A consumer shares a link on Facebook, Twitter or Instagram and gets a referral reward in the INS tokens if a new consumer joined the ecosystem via that link and placed an order.

FEEDBACK REQUESTS

Suppliers may seek to receive feedback on their products.

How it works:

The mechanism allows to set a specific set of parameters and create a focus group of consumers from whom a supplier wants to receive feedback.

The set of parameters includes:

- Age
- Gender
- Income level
- Family status
- Children
- Pets
- Purchase history

Suppliers can get a significant advantage requesting feedback for new products that have been released recently or have not been widespread in the market yet. Consumer personal data will never be shared with suppliers. Instead, the customer data will be initially processed in a centralized way on the INS platform, but later decentralized as consumers will provide privacy-preserving proofs of eligibility which enable them submitting a feedback without being identified.

Example:

Hipp, a supplier of baby milks, requests a feedback from a focus group of women 25-35 years old with kids and \$30,000-50,000 annual income who bought Hipp's baby milks in the last 6 months.

MINIMUM BALANCE

Supplier must buy and hold a balance in INS tokens equal to 10% of previous month sales to guarantee the ability to pay loyalty, promotion and cross-marketing rewards.

Consumers wishing to participate in voting for new suppliers and products will need to hold a balance in INS tokens to be eligible to vote.

LEVEL

Gamification will be an important part of growing and engaging the consumer community. Each consumer will be earning a level. Consumer level grades: Newbie, Fan, Pro, Expert, Guru.

Consumer's level depends on:

- Number of orders placed
- Frequency of orders
- Total amount spent
- Votes for new manufacturers and products

Depending on the level reached, a consumer will become more influential and be able to vote more frequently. For example, a consumer with Newbie level can vote for only 5 new products per week and can not vote for new manufacturers, while a consumer with Guru level can vote for up to 5 new manufacturers and 50 new products per week.

Consumer's level will depend on manufacturers and products that he voted for. The better sales for these products go, the faster a consumer will get to the next level.

RATING SCORE

The reputation system is important to establish trust between counterparties. Once the online rating score can be stored on the blockchain (i.e. not held by one company such as TripAdvisor, but decentralized) everyone will want a good one.

Initially ratings will be deployed for suppliers, distribution center workers and couriers only, and later might possibly include consumers too.

The rating system should satisfy the following security requirements:

- Transparency: it should be clear how the ratings are accrued
- Legitimacy: only certain set of participants (say customers of this supplier) are able to rate
- Integrity: it should be difficult, if not impossible, to manipulate the ratings for one's good
- Privacy: the consumers who rate do not disclose their identity or other personal details

Having all the requirements satisfied in a decentralized way is a task notorious for its difficulty. There exists vast scientific literature on secure rating mechanisms, which is beyond the scope of this document. We plan to code the rating smart contracts so that they would count the ratings and accept privacy-preserving proofs of validity from consumers.

ORDER STATUS

All smart contracts are limited in their ability to read data outside the blockchain because there is no way to guarantee different nodes will receive the same results or that the results will not be manipulated. The natural way to make smart contracts process external data is to submit it digitally signed by a proper participant (oracle) from off-chain so that a contract can verify the signature and process the data.

The order status report forms automatically during the fulfillment process. The usual status report contains the following data:

- Signed confirmation from a supplier about receipt of a supply request transmitted via the INS Platform.
- Signed confirmation from a distribution center worker about receipt of products delivered by a supplier to the distribution center.
- Signed confirmation from a distribution center worker that the order is assembled and ready to be passed to a courier.
- Signed confirmation from a courier about receipt of the order from a distribution center worker.
- Signed confirmation from a consumer that order is successfully delivered to him.

Each participant has a private key to his account securely encrypted and stored in the wallet, and the latter also creates and verifies signatures so that the entire process is smooth. Once the statuses are reflected on-chain, this data is available for consumption by the other participants or various smart contracts in the system.

DISPUTE RESOLUTION

Maintaining a high rating score incentivise all ecosystem participants to act truthfully, rendering the dispute mechanism unnecessary in practice in the vast majority of cases.

If a dispute is unavoidable, the mechanism will work as follows:

1. A consumer initiates a complaint:
 - a. Choses a problem type from the list.
 - b. Adds detailed information what happened, attaches documents or photos, if needed.
 - c. Submits the form.
2. The form arrives to a defendant and he can accept or reject it.
 - a. If the defendant accepts the complaint, he pays the amount in dispute to the complainant and closes the complaint. The defendant's rating score decreases. The majority of complaints will be solved in this way.
 - b. If the defendant rejects the complaint, the form is sent for additional investigation. INS employees investigate it and make a decision that is obligatory for execution.
3. Depending on the decision, the defendant's or complainant's rating score will be decreased.
 - a. If the complaint is declared valid, the defendant's rating score decreases more significantly than in the case of voluntary acceptance of the complaint without sending to investigation. The defendant is obliged to to pay the amount in dispute.

- b. If the complaint is declared invalid, the complainant's rating score decreases.

Example:

1. The complaint is created by a consumer who was unsatisfied with the quality of delivered products. The consumer makes a complaint with the reason "low quality of products", attaches photos of bad quality products, and submits the complaint.
2. The supplier receives the complaint but rejects it. The complaint goes to an INS employee who investigates the case, gets additional feedback from both sides and announces the verdict that the supplier should pay compensation to the consumer.
3. The supplier pays the compensation and gets its rating score decreased.

PERSONAL DATA SECURITY

Handling personal data securely is a task of great importance to us. Due to the public nature of data in the blockchain, we cannot store such information as customer names, addresses, KYC data, DC workers' and couriers' documentation there.

To allow cooperation of different entities in the ecosystem, the INS platform will store the permissions on the blockchain so that they are easily verifiable. The actual personal data and information will be stored in a centralized storage, managed and secured by the INS Foundation. The amount of personal data we store is minimally necessary to conduct operations such as voting that are not yet decentralized. As the decentralization continues, we will store less and less personal data.

The secure storage will allow accessing the data without the need for usernames or passwords using the following scheme:

- When the data is saved into the storage it will be linked to the public identifier of the entity such as a blockchain address.
- The party that wants to retrieve the data should confirm their identity by signing the request with the private key that corresponds to their blockchain address.
- Storage service will get the information about permissions from blockchain, check that the signature is valid and the requester has the right to access the data.
- If the check is successful, the data will be returned to the requestor and a confirmation record will be made in the blockchain.

In this way, only the authorized parties will be able to get personal data and each entity will be able to check when and with whom their information was shared.

5.2. INCENTIVES FOR SUPPLIERS

Suppliers in the INS ecosystem have the following incentives:

- Publish many products to make them easily available for consumers
- Provide fair prices on their products and compete openly with other suppliers
- Customise the INS customer app according to their own branding, promote the app to consumers to have a higher chance for repeated use
- Publish in the customised apps products of other suppliers which have no direct competition with them to get cross-marketing fees
- Serve in a trustful manner to keep a high rating score and attract more consumers to order their products
- Provide attractive promotion and loyalty rewards to acquire and retain consumers
- Get fast and detailed feedback on products
- Participate in the Token Sale and hold significant amount of the INS tokens to have enough tokens to provide promotion and loyalty rewards for consumers

5.3. INCENTIVES FOR CONSUMERS

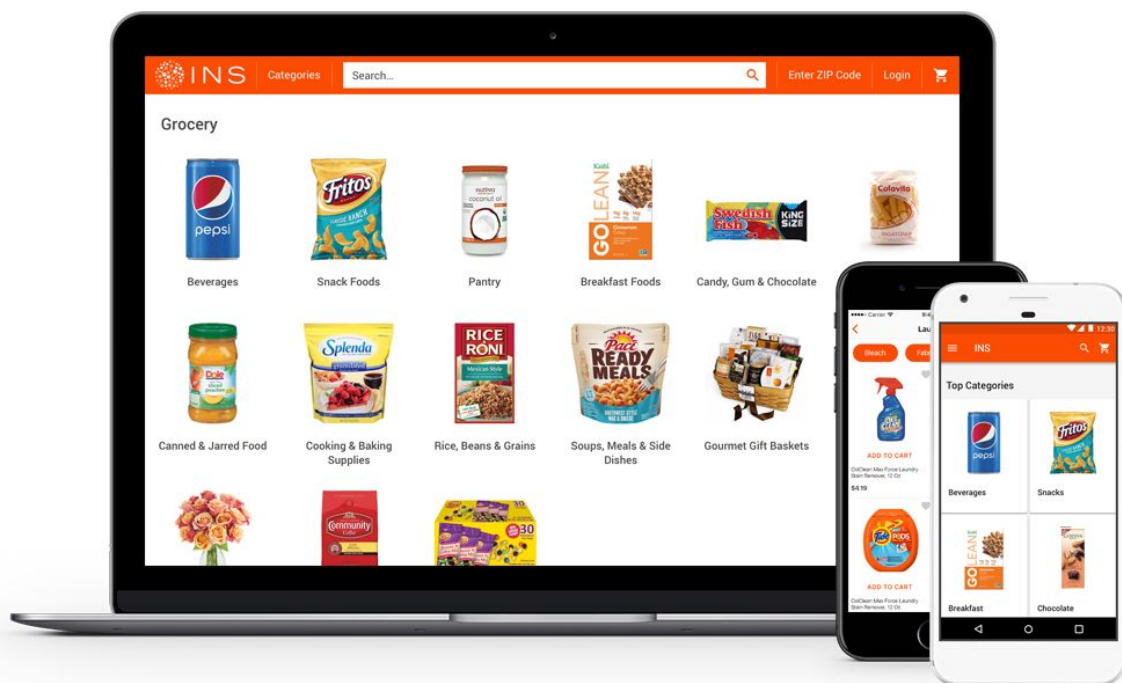
Consumers in the INS ecosystem have the following incentives:

- Order everyday grocery and consumable products cheaper than at retail stores
- Get orders delivered to the doorstep without need to spend time on offline shopping
- Leave feedback on products to influence suppliers
- Get promotion and loyalty rewards provided by manufacturers
- Get referral rewards

6. INS APPS & INTERFACES

The INS Foundation will develop and publish a website and mobile apps for consumers, as well as mobile apps and/or web-based interfaces for all other ecosystem participants. Mobile apps will run natively on iOS and Android devices and web-based interfaces will run inside a web browser without the requirement of local installation.

6.1. CONSUMER APPS & WEBSITE



Consumers will be able to shop for groceries and perform all other actions (voting, providing feedback, etc) on the INS website or in the apps.

The consumer app will be open source and implement the consumer side of the model including access to smart contracts and access to products from a decentralized cloud storage.

The official INS consumer app will be published as open source software on GitHub and serve as the formal reference implementation. Any supplier is encouraged to alter the official app and release their own branded and customized app for the INS ecosystem. This is beneficial for suppliers as they are encouraged to perform this process in order to provide a branded experience. By specifying their own supplier address as a cross-marketing address, providers will enjoy the cross-marketing fee paid by third party suppliers for products ordered by users of their app.

The INS Foundation will publish an open source customization software development kit (SDK) with tutorials and documentation to make the app customization process as easy as possible.

The following aspects of the app customization for suppliers will be officially supported and documented:

- Changing the UI, graphics, colors and branding of the app
- Setting the supplier address for cross-marketing fee settlements
- Customization of the product discovery process by changing the filters and sort order of displayed products from across the network

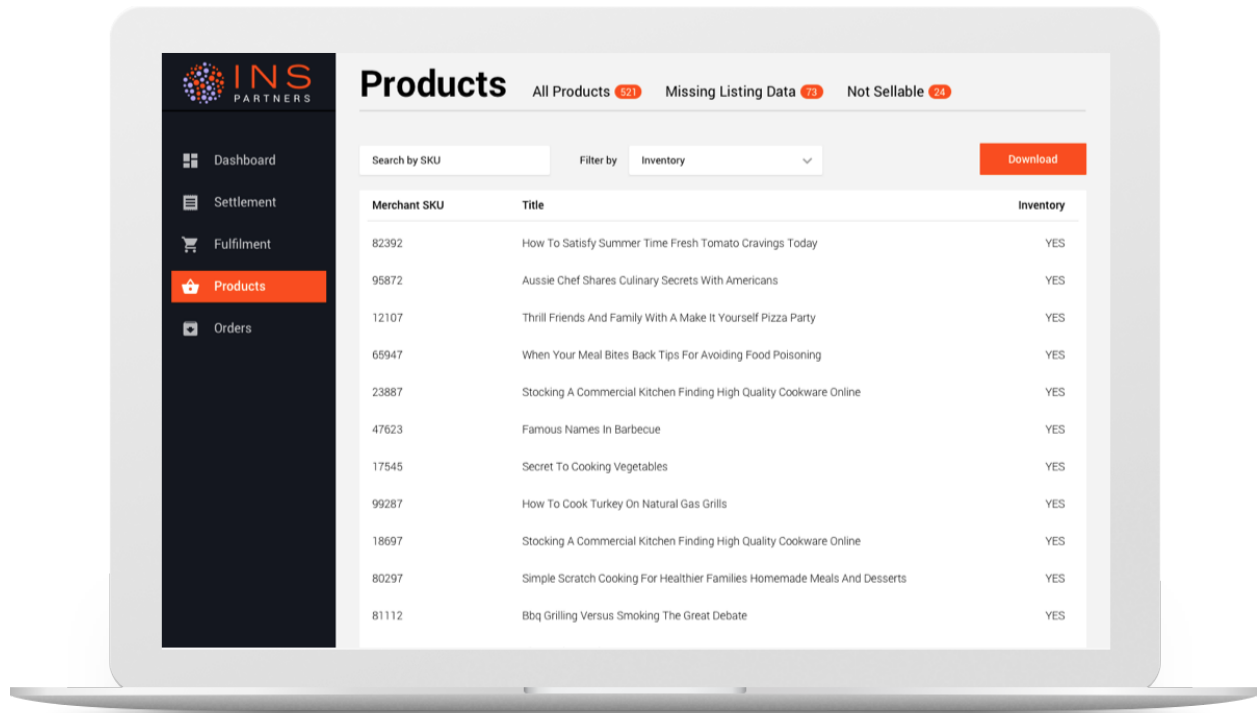
Customized app implementations are not forks of the INS platform and are not forks of the INS token but simply a different client for the same network providing a different user experience while maintaining the core characteristics of the network such as reliance on the INS token for transacting in the ecosystem.

6.2. FULFILLMENT APP

The INS fulfillment app will provide a smooth order fulfillment process to allow distribution center workers and couriers to coordinate with each other, suppliers and consumers. The fulfillment app will have on-chain access to smart contracts and access to products from a decentralized cloud storage.

The fulfillment app will be published on Android Play to simplify the installment process for distribution center workers and couriers.

6.3. WEB INTERFACE FOR SUPPLIERS



The web interface for suppliers will run in a web browser without the requirement of local installation and allow to:

- Submit a new supplier application
- Submit a new product application
- Edit and remove products
- Perform stock control
- Set and edit delivery options
- Set promotion, loyalty and cross-marketing rewards
- Get detailed sales stats

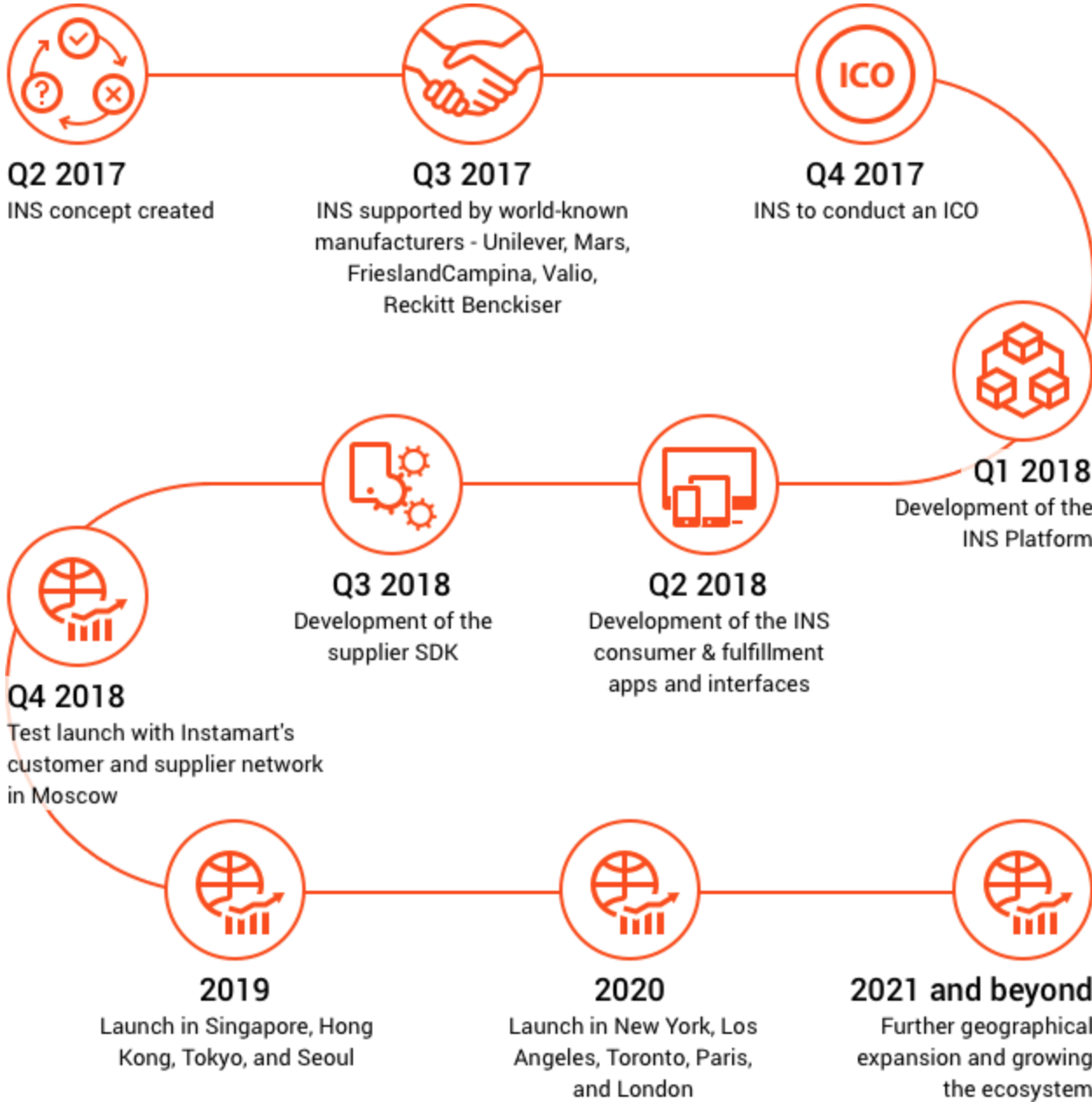
6.4. WEB INTERFACE FOR DC OPERATORS

The web interface for distribution center operators will run in a web browser without the requirement of local installation and allow to:

- Set warehousing fee
- Get stats on orders fulfilled via a distribution center
- Get earning report

7. ROADMAP

The road to creating the INS ecosystem involves many different aspects, such as technology extension, operational infrastructure, partnerships and the launch of new marketing initiatives. The following section outlines a development roadmap, expansion plan and financial projections.



7.1. DEVELOPMENT ROADMAP

The INS Foundation's ultimate goal is to create the leading decentralized consumer market used by broad audiences by maintaining a thriving ecosystem of consumers willing to buy everyday products at lower prices and suppliers looking to sell directly and surpass existing retail chains. The main role of the INS Foundation is to develop the open source technology required for running the decentralized INS ecosystem and create a successful model to incentivize all participants.

The INS platform is built with the solid foundation of Instamart's infrastructure and resources. Instamart's main product to date is a grocery marketplace with a wide assortment of products and same-day delivery. Interfaces include a web-based order management platform, fulfillment apps for pickers and couriers on Android, and native mobile apps for consumers on iOS and Android. The experience gained by catering to the existing 50,000+ clients and relationships with hundreds of suppliers of different sizes from various segments are key to designing an easily accessible platform for the grocery market that will successfully engage broad audiences.

Instamart will drive traffic to the INS ecosystem from the first days after launch. Instamart will also leverage its ties with suppliers to bring them to the INS ecosystem.

INS PLATFORM DEVELOPMENT

The first milestone is the implementation of the decentralized INS platform. The team has always welcomed feedback from the community regarding the specifics of the platform and plans to continually improve it to make the platform fully secure and fair.

After the token sale period, all contributors will receive the ERC-20 compatible INS token on the Ethereum network. After launching the INS Platform on own blockchain platform or a blockchain platform that will be chosen from the list of available platforms (Ethereum Raiden, EOS, Tezos, Exonum) in H2 2018, a token native to that platform will be deployed. The ERC-20 compatible INS token will be exchanged 1-to-1 with a native INS token.

The main part of the decentralized platform will be implemented as a set of smart contracts carrying out the behaviors described in the INS Platform section of this document.

The official smart contracts will be published as open source software on GitHub and include implementation for:

- Basic functionality like trading tokens between addresses
- Publishing of a product, specifying category assignment, name, volume, price, description, ingredients, and delivery area
- Reporting during the fulfillment process
- Promotion and loyalty reward mechanism
- Cross-marketing reward mechanism
- Complaint resolution mechanism

DEVELOPMENT OF APPS AND WEB INTERFACES

While the first milestone concentrates on the backend of the system, the second milestone concentrates on the frontend and end-user experience. The INS Foundation will release the INS website and a reference implementation of the INS consumer app and INS fulfillment app according to the guidelines specified in the relevant section of this document. The INS consumer app will be released as open source software on GitHub. The INS fulfillment app will be released on Google Play and other relevant repositories. We will use React and React Native technologies since it will allow to share most of the codebase between web/mobile. The apps will include a thin client based on a standard open source implementation that will allow the apps to communicate with the various smart contracts on the INS platform.

Planned functionality of the INS consumer website and app includes:

- Ability to create a profile and fill-in personal information
- Ability to create an INS wallet, see current balance and perform basic transactions
- Ability to buy and sell INS tokens using various fiat currencies and cryptocurrencies using dedicated specialized third-party exchanges
- Ability to consume promotional rewards
- Ability to get promotion and loyalty rewards
- Products discovery using product categories, sorted lists, search and filters
- Product details screen with detailed information (description, ingredients, price, etc.)
- Cart and checkout screens
- Ability to vote for new suppliers and products

Planned functionality of the INS fulfillment app includes:

- Ability to create a profile and fill personal information
- Ability to choose a role (DC worker or courier)
- Ability to see the order fulfillment flow and act according to instructions (take products delivered by a supplier, sort products depending on storage mode, assemble an order, transmit an assembled order to a courier, accept an order from a DC worker, deliver an order to a consumer)
- Ability to see an amount of earned tokens

The web interface for suppliers and distribution center operators will run in a web browser without the requirement of local installation. The functionality guidelines for the supplier and distribution center operator web interfaces are presented in the relevant sections of this document.

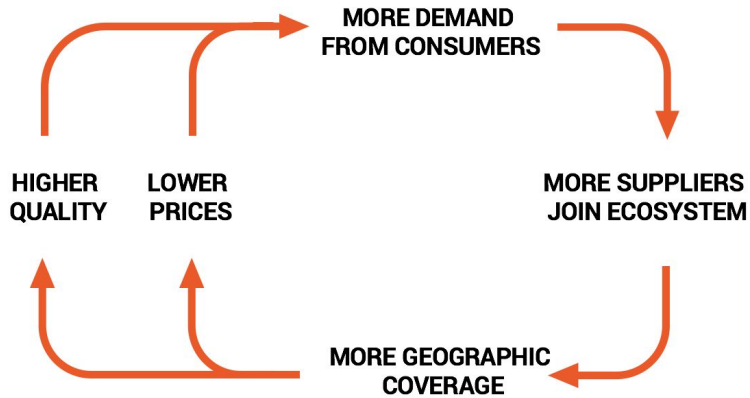
GROWING THE ECOSYSTEM

With the majority of required technology for operating the INS ecosystem at scale available (platform, customer website and reference implementation app, fulfillment app, and web interfaces for suppliers and distribution center operators), the main focus of the INS Foundation will shift from development to growth. Investment in network growth will not wait until all development has been finalized and will take place in parallel as soon as viable versions of these products are available for preliminary release.

Growth of the network is two-sided as detailed below.

SUPPLIERS

The INS ecosystem will benefit from as many high-quality suppliers joining the ecosystem as possible. Suppliers are the publishers and providers of products in the ecosystem and serve as engines for driving traffic to the ecosystem. Suppliers consume INS tokens for loyalty programs, promotion credits and cross-marketing fees and depend on INS to operate. Channels for attracting suppliers include inviting hundreds of suppliers from Instamart's existing database, direct contacts with suppliers, participation in relevant meetings and conferences, forming partnerships with supplier associations and providing guidance and support to new suppliers interested in joining the ecosystem in order to make the process as seamless as possible. A more assertive approach to bring suppliers into the ecosystem includes pre-creation of a branded app for relevant entities that can profit from acting as suppliers and approaching these entities with a ready-made solution that only requires publishing products and spending money on marketing in order to turn a profit.



CONSUMERS

The more active consumers are in the network, the more turnover and the greater the profits will be for suppliers. Greater turnover will increase the demand for INS tokens and increase the ecosystem value. Channels for increasing the INS ecosystem consumer base include marketing and promotion of the INS app and website to broader audiences, marketing and promotion of best-selling products that are likely to receive strong consumer interest, and promotion of the online grocery delivery in general. Attracting more consumers is not the only avenue of growth; improving engagement of existing customers is equally important. Customer retention in the network can be increased by ongoing improvement to the core product. Such improvements will be published as updates to the reference implementation of the consumer app and encouraged to be adopted in derived apps as well. The standard practice of ongoing improvement includes monitoring app usage, analyzing user behavior and introducing iterative changes while measuring their impact on key performance metrics.

7.2. GEOGRAPHICAL EXPANSION PLAN



Our expansion plan primarily focuses on cities based on the criteria sufficient to build an effective ecosystem:

- Population of 3+ million people
- Income per capita of US \$15,000+
- Concentrated grocery market dominated by a handful of retailers (top-5 retailers share in cities as per our roadmap - ~40% in Moscow, Tokyo, Seoul, ~60% in Hong Kong, New York, Los Angeles, Toronto, and 70%+ in London, Paris, Singapore).

Moscow, having a huge and affluent population, the grocery market dominated by a few large retailers, and the online grocery market of \$0.5 billion in 2016 with a 30%+ CAGR in the next few years, is a good testing field. The INS team’s previous experience with Instamart serves as a very solid jump start and will save time and money on trial and error.

With the majority of technology for operating the INS ecosystem available and tested in Moscow, we plan to rollout to 10 cities around the globe (Stages 1-2) to accelerate the adoption of INS at the global level (Stage 3).

Geographical expansion plan

Stage	Time	Regions
1	2018	Base technology development Test launch in Moscow (Russia)

2	2019-2020	Technology enhancement based on test results Launch in Hong Kong (China), Tokyo (Japan) and Seoul (South Korea), Singapore (Singapore), New York (United States), Los Angeles (United States), Toronto (Canada), London (United Kingdom) and Paris (France). We reserve the right to reconsider the list of target cities after the test launch
3	2021 and beyond	Rollout to other cities with independent distribution centre operators

For stages 1 and 2, we plan to lease and operate distribution centers to accelerate adoption of the INS platform by suppliers and consumers. On stage 3, we will be actively engaging independent distribution center owners to join the INS ecosystem, accelerating expansion and further enhancing the decentralized nature of the ecosystem.

7.3. PROJECTIONS

The speed and width of the INS ecosystem expansion significantly depends on the amount of capital raised. We estimate that \$63 million will be enough to develop all necessary technologies and execute the expansion plan presented earlier in this document. With less capital raised, the expansion plan will be reviewed to adapt to an amended funding schedule.

Base technology development and test launch in Moscow on stage 1 requires \$9 million. We will use the test results to enhance technology, consumer experience and business processes and adapt them to different countries.

A new city launch on stage 2 will require ~\$5 million on average. This amount includes hiring a local management team, renting distribution centers, and conducting marketing campaigns to onboard local suppliers and consumers.

On stage 3, launching a new city will become cheaper with more distribution center providers joining the ecosystem and high awareness about the INS ecosystem that would translate into lower marketing costs.

The INS platform expansion plan assumes launching in 10 cities in 2018-2020 and focusing on a particular geographic area each year (2019 - Asia, 2020 - Europe & US) in order to control the rollout and focus resources in the best possible way. As per our projections, the INS ecosystem will reach a \$15+ billion turnover by 2022.

Expected INS ecosystem GMV

	2018 F	2019 F	2020 F	2021 F	2022 F

# of cities	1	5	10	15	20
Turnover (\$ million)	24	276	1,560	5,700	15,420

8. TOKEN MECHANISM

8.1. INS TOKEN STRUCTURE

Please note that tokens referred in this whitepaper are cryptographic tokens on a launched blockchain that adopts the INS Foundation's software. They are not ERC-20 compatible tokens being distributed on the Ethereum blockchain in connection with the INS Token Sale.

After the Token Sale period, all contributors will receive an ERC-20 exchangeable INS token on the Ethereum network. Whenever the INS blockchain is launched with its own token mechanism, the ERC-20 token will be always accepted for exchange to a new token 1-to-1.

The INS token ("INS") is a core component of the INS ecosystem and is designed to facilitate all kinds of operations in the INS ecosystem that make the token an integral part of the ecosystem and the driver for its economy. The INS token is fractionally divisible, transferable and fungible.

The token balances and transfers will be kept tracked by INS. In the case of any force majeure, such as large token theft, contract compromise, or a disrupting change of Ethereum protocol, INS may opt to freeze token transfers and issue a new token contract with balances replaying that of the original token registry by certain date. In the case of an Ethereum fork, INS will properly announce which branch it will support.

8.2. INS TOKEN USAGE AND ADOPTION

The INS token is one of the currencies for buying and selling products, and the only means of exchange for handling the promotion and marketing campaigns, and conducting all other types of operations within the INS ecosystem.

TOKEN USAGE

1. SUPPLIERS
 - a. Loyalty rewards
 - b. Promotion rewards
 - c. Cross-marketing rewards
 - d. Feedback rewards

- e. Minimum balance hold
2. CONSUMERS
 - a. Purchase of products
 - b. Optional minimum balance held to participate in voting
 3. THE INS FOUNDATION
 - a. Referral rewards to consumers

ADOPTION BY BROAD AUDIENCES

One of the key goals of the INS Foundation is the introduction of a decentralized consumer marketplace to audiences that have little experience with cryptocurrencies and likely to have little-to-no knowledge of blockchain-based technologies. The INS ecosystem will be expanding beyond the crypto community and focusing its activity on the broad audiences. Providing services to this audience requires perfect knowledge of the grocery industry and its specifics, including its regulatory framework. Given extensive industry experience, our team knows exactly what consumers and manufacturers want.

We will make it very simple and straightforward for consumers to buy INS tokens. The complexities of opening and maintaining a cryptocurrency wallet will be made seamless in the INS website and apps.

INS is designed in close cooperation with manufacturers and consumers. Manufacturers will be interested in promoting the INS ecosystem as they will be able to create their own versions of an app with customised branding and a limited number of listed products. Our launch partner is Instamart, with a user base of over 50,000+ active customers.

The INS Foundation will incentivise manufacturers, which currently do not have direct access to consumers to start direct interaction with them through adoption of the INS platform and technology. Manufacturers will be able to benefit from the decentralized system and reap value that they would otherwise not receive without the INS platform.

SUPPLIERS ALREADY COMMITTED TO STRONG SUPPORT OF INS

INS has received strong support from some of the largest grocery manufacturers in the world as well as smaller local producers. Below is a list of select companies who have signed memoranda of understanding with INS regarding future listing on the platform.



8.3. LONG-TERM ATTRACTIVENESS

For a token to be successful over time, it must be an inevitable part of a growing economy. As the INS token is adopted by more consumers and suppliers, the network effect of the INS ecosystem will grow, building the value of the ecosystem for the benefit of long-time holders and token crowdsale participants.

A successful economy requires the INS token to have growing demand within the INS ecosystem. Since all transactions on the platform require INS tokens, demand for the token will grow in proportion to the number of active users and the turnover volume generated by them. Demand will also be driven by a number of listed products and suppliers' adoption of additional features available on the platform – promotion, marketing, loyalty and feedback campaigns. The model also assumes that consumers can earn INS tokens as a referral reward that will create an additional incentive for them to start spending INS for everyday grocery purchases.

The supply of INS will be limited to tokens issued during the Pre-ICO and ICO.

Turnover per the INS token (forecast)

	Unit	2019	2020	2021	2022
Turnover	\$ million	276	1,560	5,700	15,420
INS tokens	# million	150	150	150	150
GMV / INS token / year	\$/ token /year	1.8	10.4	38.0	102.8

Due to a short-term nature of transactions (usually not more than 2 days), we do not expect the token price volatility can become an issue for ecosystem participants. We expect the intra-day volatility will fade away with more participants joining the ecosystem and reducing the impact of each of them.

9. TOKEN SALE

9.1. TOKEN SALE SUMMARY

In order to finance the roadmap, the INS Foundation will conduct a 2-staged Token Sale:

- Pre-ICO
- ICO

INS is a token that powers the INS ecosystem. After the Token Sale period, all contributors will receive an ERC20 exchangeable INS token on the Ethereum network.

The total amount of tokens is proportional to the amount of bitcoins, ethers and other cryptocurrencies contributed during the Pre-ICO and ICO periods. There will be no token creation, minting or mining after the end of the Token Sale period. Tokens will be transferable once the crowdsale is successfully completed.

TOKEN DISTRIBUTION

The INS distribution after the Pre-ICO and ICO events is summarized in the table below:



PRE-ICO

Start date: 11:00 AM GMT on October 16, 2017

End date: 11:00 AM GMT on October 23, 2017

Payment methods: BTC, ETH, altcoins, bank transfer

Goal: 10,000 ETH

Token exchange rate: 1 ETH = 300 INS tokens

Min purchase: 1 ETH

Discounts:

Contribution amount		
above 100 ETH	10 -100 ETH	1 - 10 ETH
35%	30%	25%

ICO

Start date: 11:00 AM GMT on November 20, 2017

Payment methods: BTC, ETH, altcoins, bank transfer

Max goal: 200,000 ETH (in addition to funds contributed during the pre-ICO)

Min goal: 20,000 ETH (in addition to funds contributed during the pre-ICO)

Token exchange rate: 1 ETH = 300 INS tokens

Min purchase: 0.1 ETH

Discounts:

	Contribution amount			
	above 100 ETH	10 -100 ETH	1 - 10 ETH	below 1 ETH
Days 1-3	25%	20%	15%	10%
Days 4-7	15%	10%	5%	0%
Week 2	5%	0%	0%	0%
Week 3	0%	0%	0%	0%
Week 4	0%	0%	0%	0%

See [section 9.2. "Raised Funds Distribution"](#) below for the detailed information about the fund allocation.

- If the ICO minimum goal is not reached, then after the ICO period, the money will be refunded to the participants.
- In case of the ICO maximum goal not being reached, tokens distribution (team, advisors, early supporters, bounty, reserve fund) is proportional to the number of INS tokens generated during the Pre-ICO and ICO.
- Upon reaching the ICO maximum goal, we will immediately end the Token Sale.

BOUNTY & REFERRAL CAMPAIGN

Activity	% of Bounty pool
BitcoinTalk Signature & Avatar Campaign	30%
Translation & Local Community Management	25%
Youtube	10%
Twitter	10%
Blog Posts and Media	25%

Activity	Reward as % of tokens purchased
Referrals	5%

Bounties and referral rewards are made in INS tokens and provided after the ICO ends. Referral reward is 5%, based on the number of tokens purchased by those who came via the reference link. At the end of the Token Sale all sold tokens are considered to be 60% of the total supply. 15% is distributed to the INS team. 5% is distributed to early supporters, advisors and bounties receivers. The remaining 20% of tokens is held in the Reserve Fund. The minimum amount of the bounty pool is 300,000 INS tokens.

VESTING

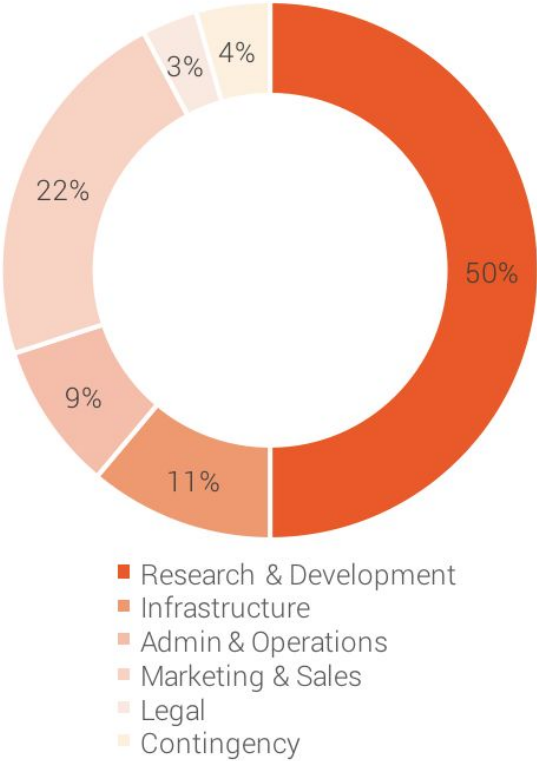
The INS team will have 2 years vesting with a 6-month cliff. This means we will mature 25% of our tokens each 6 months.

9.2. RAISED FUNDS DISTRIBUTION

The funds raised during the token sale will be used in accordance with the roadmap presented above. Token sale terms imply that the level of project financing might be anything between the minimum and maximum caps. The roadmap is a full vision to be completed if the maximum cap is reached.

MINIMUM FINANCING

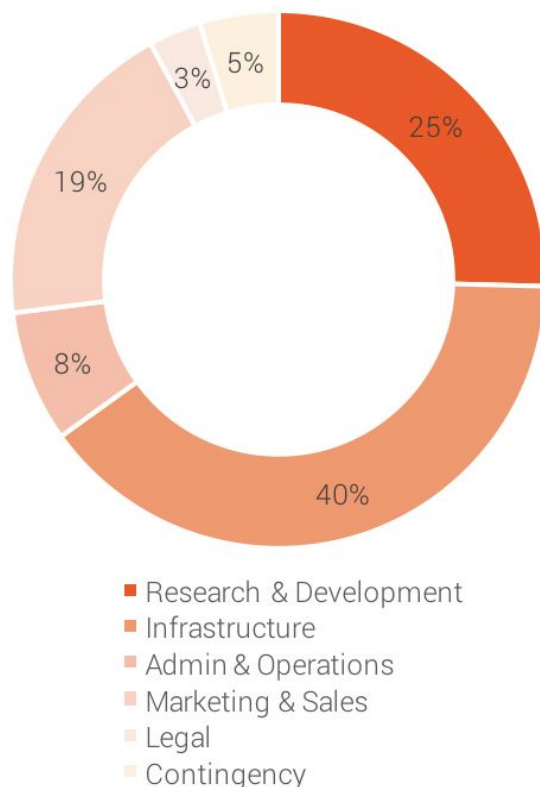
Use of funds	Amount
Research & Development	\$4,500,000
Infrastructure	\$1,000,000
Admin & Operations	\$800,000
Marketing & Sales	\$2,000,000
Legal	\$300,000
Contingency	\$400,000
TOTAL	\$9,000,000



The minimum financing plan assumes development of fundamental features for the INS Platform and basic apps and interfaces for all ecosystem participants to enable initial traction, as well as a limited launch in one city with moderate marketing support. Under this scenario, the INS Foundation will search for 3rd party infrastructure providers to launch in other cities.

TARGET FINANCING

Use of funds	Amount
Research & Development	\$16,000,000
Infrastructure	\$25,000,000
Admin & Operations	\$5,000,000
Marketing & Sales	\$12,000,000
Legal	\$2,000,000
Contingency	\$3,000,000
TOTAL	\$63,000,000



The maximum financing plan assumes development of all features for the INS Platform and feature-rich apps and interfaces for all ecosystem participants, as well as the launch in 10 cities across the world with a strong marketing support to accelerate adoption by suppliers and consumers. Under this scenario, the INS Foundation will launch infrastructure facilities itself in the first 10 cities and will be looking for 3rd party infrastructure providers in other cities to further expand the geographical presence.

Research & Development costs cover all R&D expenses, including design and development of smart contracts, cryptographic mechanisms behind, the INS Platform, apps and interfaces development, SDK, etc. Includes opening of an R&D center with approximately 30 engineers.

Infrastructure includes the costs associated with the initial launch of physical infrastructure (distribution centers) in the first 10 cities according to the roadmap.

Admin & Operations consists solely of employment costs excluding R&D team on the head office and workforce for the infrastructure ramped up by the INS Foundation.

Marketing & Sales budget will be allocated on acquisition of both suppliers and consumers. Channels for attracting suppliers include inviting existing database of hundreds suppliers from

Instamart's database, direct contacts with suppliers, participation in relevant meetings and conferences, etc. The key source of new customers is going to be word-of-mouth, as the product gives them a very strong commercial incentive to start ordering.

Legal costs include all legal expenses associated with expansion of the INS ecosystem in many countries around the world.

Contingency fund is calculated as 3-5% of the total budget, depending on the amount contributed.

9.3. FUNDS ESCROW

All payments received for INS tokens in connection with the INS Pre-ICO and ICO will be held in escrow in a multi-signature wallet. Keys will stay with the INS team and Blockchain Law Group. Blockchain Law Group is a group of legal practices with presence in Los Angeles and Moscow, provides services in the field of blockchain technology, issuance of product and security tokens, and handling cryptocurrency matters.

10. TEAM

35 professionals with previous experience in leading technology and retail companies. The founding members of the team have known each other since 2010. We are supported by world-renowned advisors and investors.

SELECTED TEAM EXPERIENCE

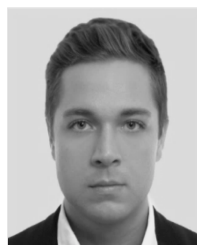


10.1. CORE TEAM



PETER FEDCHENKOV
CEO

Brings wealth of retail and tech experience. Previously with Goldman Sachs and IBM. Teaches a class on retail at the Stockholm School of Economics in Riga. Harvard Business School MBA



DMITRY ZHULIN
STRATEGY

Experienced venture capital and private equity professional with focus on retail and ecommerce. 5 years of investing experience in bitcoin and crypto-assets. Previously with VTB Capital Private Equity, Rothschild and PwC. University of London, PgD in Finance



DMITRY KHOVRATOVICH
BLOCKCHAIN & SMART CONTRACTS

4 years experience in blockchain and smart contracts. Recognized expert in cryptography and security (12 years, 2,000+ citations). Designer of Argon2 (the winner of the Password Hashing Competition) and Equihash



DMITRY BOBYLEV
TECHNOLOGY

Previously CTO and founder of Do Interactive, successful software development studio. Full-stack engineer with primary experience in Ruby and React Native. Security and UNIX enthusiast



OLEG LITVIN
SENIOR TEAM LEAD

Software developer with 10+ years of experience. Database performance optimization expert. Early researcher of self-driving car technology in Bauman Moscow State Tech University



PAVEL YAKSHANKIN
TEAM LEAD

5+ years of leading development teams. Previously with Undev, FunBox and Voltmbi. RailsClub 2016 conference speaker. Experienced in Ruby, Javascript, Erlang



NIKOLAY LIPKIN
MARKETING

Previously marketing team at Foodpanda's Delivery Club, leading food delivery service in Russia (acquired by Mail.Ru Group). Deep experience in performance and mobile marketing



MARIA LAPUK
PR

Over 10 years of experience in digital PR. One of the most recognized PR leaders in the region. Maria's awards include "PR Profile of the Year 2015", "Most Influential Networker 2013", "PR Professional of the Year 2012"



PAVEL GLUKHOV
OPERATIONS

Previously COO at Hermes DPD, subsidiary of Europe’s leading fulfillment provider Hermes. Oversaw shipment of over 30,000 orders per day. Over 15 years experience in operations



PAVEL KUZNETSOV
CONTENT

One of the leading professionals in the content management and creation space having led content operations for Utinet.ru. Experience with content creation for Unilever, Procter & Gamble, Valio, PepsiCo, etc.

DANIIL GALKIN
CUSTOMER SERVICE

Previously in customer care with Tinkoff Bank, world’s largest pure online bank. Daniil started his career in Samsung and Microsoft



MICHAEL SCHMIDT
US EXPANSION

Based in Austin, Texas. Entrepreneur and engineer with wealth of experience launching new technology products. Georgia Institute of Technology MS and Harvard Business School MBA



PRABHAKAR REDDY
ASIA EXPANSION

Based in Bangalore. Serial entrepreneur, with 9+ years of experience running successful businesses in India, Dubai and San Francisco.

Recipient of “Dubai Software Development Trade Show 2008”. MBA from Harvard Business School

10.2. BOARD & ADVISORS



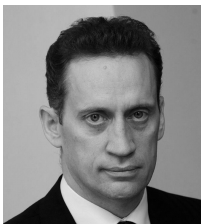
ILYA YAKUBSON
RETAIL ADVISOR

One of the best executives in the retail space. He was recognised as “Man of the Year in Retail 2015”. Ex-CEO of Dixy, #4 grocery retail chain in Russia (2009-2015)



SERGEY SOLONIN
PAYMENTS ADVISOR

Founder and CEO of Qiwi Group, the leading provider of next generation payment services in Russia and the CIS with turnover exceeding \$10 billion



DMITRY GLADKOV
LEGAL ADVISOR

Partner at Nektorov, Saveliev & Partners (#1 VC law firm award 2015). 20+ years of experience in corporate law and financing advisory. Ex-General Counsel at UBS (Moscow). LLM from University of Georgia School of Law

10.3. INVESTORS



Mail.ru Group, founded by a legendary investor Yuri Milner, is the largest Internet company in Eastern Europe and the world's 7th largest company by pageviews. Mail.ru Group owns social networks (VK, Odnoklassniki), gaming (Armored Warfare, Skyforge, Perfect World), map services (Maps.me), car sharing (BeepCar), and food delivery (Delivery Club).

LEV KHASIS



X5RETAILGROUP

Walmart

Jet

BOXED

LendingHome

SBERBANK

First deputy CEO of Sberbank, the largest retail bank in Russia, with a decent experience in retail:

- CEO of X5 Retail Group, the largest grocery retail chain in Russia (2006-2011)
- Senior Vice-President of Wal-Mart (2011-2013)
- Vice-Chairman of Jet.com (acquired by Wal-Mart for \$3 billion in 2016)
- Board Member of Boxed.com
- Board Member of LendingHome.com

SERGEY SOLONIN



QIWI

Entrepreneur with over 20 years of experience in the payment services and banking industries.

Founder and CEO of Qiwi Group, the leading provider of next generation payment services in Russia and the CIS with turnover exceeding \$10 billion

ILYA YAKUBSON



ДИКСИ
Makes your life better everyday

One of the best executives in the retail space. He was recognised as “Man of the Year in Retail 2015”.

Ex-CEO of Dixy, #4 grocery retail chain in Russia (2009-2015)

11. CONCLUSION

We believe the following differentiates INS from other token sales and wider investment opportunities.

INS addresses the largest global consumer retail market - the grocery industry

- High consumer demand and opportunity for impact

People spend materially on grocery shopping, from 5% of their disposable income in developed markets to 50% in emerging economies. Making food cheaper will make a huge difference in consumers' lives.

- **Large growing global industry needing innovation**

World grocery sales totaled \$5.6 trillion in 2013 and are forecasted to grow at a CAGR of 6.1% from 2014 to 2020, reaching an estimated \$8.5 trillion in 2020. This largest subsegment of the global retail market has been lagging behind in terms of innovation and is ripe for disruption.

The INS ecosystem will disrupt the existing grocery retail industry and become a new standard driving accelerated adoption and massive usage of the INS token

- **Long-awaited paradigm shift**

Connecting manufacturers and consumers has been a long-lasting idea, but only with the advent of smart contracts and blockchain will it become a reality. INS will eliminate retailers as obsolete intermediaries and save costs along the way from farm to plate.

- **Advanced technology drives societal impact**

The technology enables smaller and independent producers to provide a wide range of high-quality products bypassing retailers directly to consumers.

- **Unprecedented opportunity and global reach**

The INS ecosystem turnover is planned to reach \$15.4 billion by 2022 with the INS token having a potential to become one of the top-10 cryptocurrencies worldwide in terms of trading volume.

The INS team has unique business experience, grocery industry track-record, 50,000+ existing clients and many acclaimed investors

- **Deep industry insights and ability to execute on vision**

The INS team founded Instamart in 2013 on the premise of not building redundant infrastructure and related costs. While working with leading retailers, we validated consumer interest, received support from manufacturers and now have a clear vision of how we may drive a step further to benefit our customers - build the decentralized INS ecosystem.

- **Diverse functional, technology and investment foundation**

We have a strong, accomplished team with 50+ years of collective grocery experience and credentials in retail, technology and blockchain. In addition, Instamart is supported by a solid investor base with best-practice corporate governance.

12. RISK FACTORS

An acquisition of the Tokens involves a high degree of risk. Each potential purchaser of the Tokens should carefully consider the following information about these risks before he decides to buy the Tokens. If any of the following risks actually occurs, the Platform and the value of the Tokens could be materially adversely affected.

Risks and uncertainties described below in this White Paper may not be the only ones token holders face. Additional risks and uncertainties may also materially adversely affect on the Platform or the value of the Tokens.

1. RISKS CONNECTED TO THE VALUE OF TOKENS

1.1. Lack of Development of Market for Tokens. Because there has been no prior public trading market for the Tokens, the sale of the Tokens described in this White Paper may not result in an active or liquid market for the Tokens, and their price may be highly volatile. Although applications have been made to the cryptographic token exchanges for the Tokens to be admitted to trading, an active public market may not develop or be sustained after the Token sale. If a liquid trading market for the Tokens does not develop, the price of the Tokens may become more volatile and token holder may be unable to sell or otherwise transact in the Tokens at any time.

1.2. Risks Relating to Highly Speculative Traded Price. The valuation of digital tokens in a secondary market is usually not transparent, and highly speculative. The Tokens do not hold any ownership rights to Company's assets and, therefore, are not backed by any tangible asset. Traded price of the Tokens can fluctuate greatly within a short period of time. There is a high risk that a token holder could lose his/her entire contribution amount. In the worst-case scenario, the Tokens could be rendered worthless.

1.3. Tokens May Have No Value. The Tokens may have no value and there is no guarantee or representation of liquidity for the Tokens. Company Parties are not and shall not be responsible for or liable for the market value of the Tokens, the transferability and/or liquidity of the Tokens and/or the availability of any market for the Tokens through third parties or otherwise. For the purposes of this Section of the White Paper, the term "Company Parties" shall include Company and its respective past, present and future employees, officers, directors, contractors, consultants, attorneys, accountants, financial advisors, equity holders, suppliers, vendors, service providers, parent companies, subsidiaries, affiliates, agents, representatives, predecessors, successors and assigns (hereinafter in this Section – "Company Parties").

1.4. Tokens are Non-Refundable. Company Parties are not obliged to provide the Token holders with a refund related to the Tokens for any reason, and the Token holders will not receive money or other compensation in lieu of the refund. No promises of future performance or price are or will be made in respect to the Tokens, including no promise of inherent value, no promise of continuing payments, and no guarantee that the Tokens will hold any particular value. Therefore, the recovery of spent resources may be impossible or may be subject to foreign laws or regulations, which may not be the same as the private law of the Token holder.

2. BLOCKCHAIN AND SOFTWARE RISKS

2.1. Blockchain Delay Risk. On the most blockchains used for cryptocurrencies' transactions (e.g., Ethereum, Bitcoin blockchains), timing of block production is determined by proof of work so block production can occur at random times. For example, the cryptocurrency sent as a payment for the Tokens in the final seconds of the Token sale may

not get included into that period. The respective blockchain may not include the purchaser's transaction at the time the purchaser expects and the payment for the Tokens may reach the intended wallet address not in the same day the purchaser sends the cryptocurrency.

2.2. Blockchain Congestion Risk. The most blockchains used for cryptocurrencies' transactions (e.g., Ethereum, Bitcoin blockchains) are prone to periodic congestion during which transactions can be delayed or lost. Individuals may also intentionally spam the network in an attempt to gain an advantage in purchasing cryptographic tokens. That may result in a situation where block producers may not include the purchaser's transaction when the purchaser wants or the purchaser's transaction may not be included at all.

2.3. Risk of Software Weaknesses. The token smart contract concept, the underlying software application and software platform (i.e. the Ethereum, Bitcoin blockchains) are still in an early development stage and unproven. There are no representations and warranties that the process for creating the Tokens will be uninterrupted or error-free. There is an inherent risk that the software could contain weaknesses, vulnerabilities or bugs causing, inter alia, the complete loss of the cryptocurrency and/or the Tokens.

2.4. Risk of New Technology. The Platform, the Tokens and all of the matters set forth in this White Paper are new and untested. The Platform and the Tokens might not be capable of completion, creation, implementation or adoption. It is possible that no blockchain utilizing the Platform will be ever launched. Purchaser of the Tokens should not rely on the Platform, the token smart contract or the ability to receive the Tokens associated with the Platform in the future. Even if the Platform is completed, implemented and adopted, it might not function as intended, and any Tokens may not have functionality that is desirable or valuable. Also, technology is changing rapidly, so the Platform and the Tokens may become outdated.

3. SECURITY RISKS

3.1. Risk of Loss of Private Keys. The Tokens may be held by token holder in his digital wallet or vault, which requires a private key, or a combination of private keys, for access. Accordingly, loss of requisite private keys associated with such token holder's digital wallet or vault storing the Tokens will result in loss of such Tokens, access to token holder's Token balance and/or any initial balances in blockchains created by third parties. Moreover, any third party that gains access to such private keys, including by gaining access to login credentials of a hosted wallet or vault service the token holder uses, may be able to misappropriate the token holder's Tokens.

3.2. Lack of Token Security. The Tokens may be subject to expropriation and or/theft. Hackers or other malicious groups or organizations may attempt to interfere with the token smart contract which creates the Tokens or the Tokens in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, because the Ethereum platform rests on open source software, there is the risk that Ethereum smart contracts may contain intentional or unintentional bugs or weaknesses which may negatively affect the Tokens or result in the loss of Tokens, the loss of ability to access or control the Tokens. In the event of such a software bug or weakness, there may be no remedy and holders of the Tokens are not guaranteed any remedy, refund or compensation.

3.3. Attacks on Token Smart Contract. The blockchain used for the token smart contract which creates the Tokens is susceptible to mining attacks, including double-spend attacks, majority mining power attacks, "selfish-mining" attacks, and race condition attacks. Any successful attacks present a risk to the token smart contract, expected proper execution and sequencing of the Token transactions, and expected proper execution and sequencing of contract computations.

3.4. Failure to Map a Public Key to Purchaser's Account. Failure of a purchaser of the Tokens to map a public key to such purchaser's account may result in third parties being unable to recognize purchaser's Token balance on the Ethereum blockchain when and if they configure the initial balances of a new blockchain based upon the Platform.

3.5. Risk of Incompatible Wallet Service. The wallet or wallet service provider used for the acquisition and storage of the Tokens, has to be technically compatible with the Tokens. The failure to assure this may have the result that purchaser of the Tokens will not gain access to his Tokens.

4. RISKS RELATING TO PLATFORM DEVELOPMENT

4.1. Risk Related to Reliance on Third Parties. Even if completed, the Platform will rely, in whole or partly, on third parties to adopt and implement it and to continue to develop, supply, and otherwise support it. There is no assurance or guarantee that those third parties will complete their work, properly carry out their obligations, or otherwise meet anyone's needs, all of which might have a material adverse effect on the Platform.

4.2. Dependence of Platform on Senior Management Team. Ability of the senior management team which is responsible for maintaining competitive position of the Platform is dependent to a large degree on the services of each member of that team. The loss or diminution in the services of members of respective senior management team or an inability to attract, retain and maintain additional senior management personnel could have a material adverse effect on the Platform. Competition for personnel with relevant expertise is intense due to the small number of qualified individuals, and this situation seriously affects the ability to retain its existing senior management and attract additional qualified senior management personnel, which could have a significant adverse impact on the Platform.

4.3. Dependence of Platform on Various Factors. The development of the Platform may be abandoned for a number of reasons, including lack of interest from the public, lack of funding, lack of commercial success or prospects, or departure of key personnel.

4.4. Lack of Interest to the Platform. Even if the Platform is finished and adopted and launched, the ongoing success of the Platform relies on the interest and participation of third parties like developers. There can be no assurance or guarantee that there will be sufficient interest or participation in the Platform.

4.5. Changes to the Platform. The Platform is still under development and may undergo significant changes over time. Although the project management team intends for the Platform to have the features and specifications set forth in this White Paper, changes to such features and specifications can be made for any number of reasons, any of which may mean that the Platform does not meet expectations of holder of the Tokens.

4.6. Risk associated with Other Applications. The Platform may give rise to other, alternative projects, promoted by unaffiliated third parties, under which the Token will have no intrinsic value.

4.7. Risk of an Unfavorable Fluctuation of Cryptocurrency Value. The proceeds of the sale of the Tokens will be denominated in cryptocurrency, and may be converted into other cryptographic and fiat currencies. If the value of cryptocurrencies fluctuates unfavorably during or after the Token sale, the project management team may not be able to fund development, or may not be able to develop or maintain the Platform in the manner that it intended.

5. RISKS ARISING IN COURSE OF COMPANY PARTIES' BUSINESS

5.1. Risk of Conflicts of Interest. Company Parties may be engaged in transactions with related parties, including respective majority shareholder, companies controlled by him or in which he owns an interest, and other affiliates, and may continue to do so in the future. Conflicts of interest may arise between any Company Party's affiliates and respective Company Party, potentially resulting in the conclusion of transactions on terms not determined by market forces.

5.2. Risks Related to Invalidation of Company Parties Transactions. Company Parties have taken a variety of actions relating to their business that, if successfully challenged for not complying with applicable legal requirements, could be invalidated or could result in the imposition of liabilities on respective Company Party. Since applicable legislation may be subject to many different interpretations, respective Company Party may not be able to successfully defend any

challenge brought against such transactions, and the invalidation of any such transactions or imposition of any such liability may, individually or in the aggregate, have a material adverse effect on the Platform.

5.3. Risk Arising from Emerging Markets. Company Parties or some of them may operate on emerging markets. Emerging markets are subject to greater risks than more developed markets, including significant legal, economic and political risks. Emerging economies are subject to rapid change and that the information set out in this White Paper may become outdated relatively quickly.

6. GOVERNMENTAL RISKS

6.1. Uncertain Regulatory Framework. The regulatory status of cryptographic tokens, digital assets and blockchain technology is unclear or unsettled in many jurisdictions. It is difficult to predict how or whether governmental authorities will regulate such technologies. It is likewise difficult to predict how or whether any governmental authority may make changes to existing laws, regulations and/or rules that will affect cryptographic tokens, digital assets, blockchain technology and its applications. Such changes could negatively impact the tokens in various ways, including, for example, through a determination that the tokens are regulated financial instruments that require registration. Company may cease the distribution of the Tokens, the development of the Platform or cease operations in a jurisdiction in the event that governmental actions make it unlawful or commercially undesirable to continue to do so.

6.2. Failure to Obtain, Maintain or Renew Licenses and Permits. Although as of the date of starting of the Token sale there are no statutory requirements obliging Company to receive any licenses and permits necessary for carrying out of its activity, there is the risk that such statutory requirements may be adopted in the future and may relate to any of Company Parties. In this case, Company Parties' business will depend on the continuing validity of such licenses and permits and its compliance with their terms. Regulatory authorities will exercise considerable discretion in the timing of license issuance and renewal and the monitoring of licensees' compliance with license terms. Requirements which may be imposed by these authorities and which may require any of Company Party to comply with numerous standards, recruit qualified personnel, maintain necessary technical equipment and quality control systems, monitor our operations, maintain appropriate filings and, upon request, submit appropriate information to the licensing authorities, may be costly and time-consuming and may result in delays in the commencement or continuation of operation of the Platform. Further, private individuals and the public at large possess rights to comment on and otherwise engage in the licensing process, including through intervention in courts and political pressure. Accordingly, the licenses any Company Party may need may not be issued or renewed, or if issued or renewed, may not be issued or renewed in a timely fashion, or may involve requirements which restrict any Company Party's ability to conduct its operations or to do so profitably.

6.3. Risk of Government Action. The industry in which Company Parties operate is new, and may be subject to heightened oversight and scrutiny, including investigations or enforcement actions. There can be no assurance that governmental authorities will not examine the operations of Company Parties and/or pursue enforcement actions against them. All of this may subject Company Parties to judgments, settlements, fines or penalties, or cause Company Parties to restructure their operations and activities or to cease offering certain products or services, all of which could harm Company Parties' reputation or lead to higher operational costs, which may in turn have a material adverse effect on the Tokens and/or the development of the Platform.

6.4. Risk of Burdensomeness of Applicable Laws, Regulations and Standards. Failure to comply with existing laws and regulations or the findings of government inspections, or increased governmental regulation of Company Parties operations, could result in substantial additional compliance costs or various sanctions, which could materially adversely affect Company Parties business and the Platform. Company Parties operations and properties are subject to regulation by various government entities and agencies, in connection with ongoing compliance with existing laws, regulations and standards. Regulatory authorities exercise considerable discretion in matters of enforcement and interpretation of applicable laws, regulations and standards. Respective authorities have the right to, and frequently do,

conduct periodic inspections of any Company Party's operations and properties throughout the year. Any such future inspections may conclude that any Company Party has violated laws, decrees or regulations, and it may be unable to refute such conclusions or remedy the violations. Any Company Party's failure to comply with existing laws and regulations or the findings of government inspections may result in the imposition of fines or penalties or more severe sanctions or in requirements that respective Company Party cease certain of its business activities, or in criminal and administrative penalties applicable to respective officers. Any such decisions, requirements or sanctions, or any increase in governmental regulation of respective operations, could increase Company Parties' costs and materially adversely affect Company Parties business and the Platform.

6.5. Unlawful or Arbitrary Government Action. Governmental authorities may have a high degree of discretion and, at times, act selectively or arbitrarily, without hearing or prior notice, and sometimes in a manner that is contrary a law or influenced by political or commercial considerations. Moreover, the government also has the power in certain circumstances, by regulation or government act, to interfere with the performance of, nullify or terminate contracts. Unlawful, selective or arbitrary governmental actions have reportedly included the denial or withdrawal of licenses, sudden and unexpected tax audits, criminal prosecutions and civil actions. Federal and local government entities have also used common defects in matters surrounding the Token sale as pretexts for court claims and other demands to invalidate or to void any related transaction, often for political purposes. In this environment, Company Parties' competitors may receive preferential treatment from the government, potentially giving them a competitive advantage over Company Parties.



SUPPORT INS AND JOIN US TODAY

www.ins.world

[One-Pager](#)

[Presentation](#)

[Telegram](#)

[Twitter](#)

[Facebook](#)
