

Freight Coin [\$TKM]

by

Marc Ortaliz

October 1, 2017

a blockchain protocol for freight and finance in commodity trading

What is a Letter of Credit?

“A letter of credit is a document issued by a bank at the importer’s (or buyer’s) request in favour of the seller.

The buyer requests their local issuing bank to issue a credit document, which is then sent (either by post or by electronic confirmation) to the advising / confirming bank in the seller’s country. The confirming bank then informs the seller of the goods that a letter of credit has been confirmed—but the funds are not disbursed to the seller just yet; the seller must first ship the goods, with all the necessary documentation (i.e., a bill of lading).

A copy of the bill of lading is then submitted to the advising bank, which is then sent to the issuing bank, while the goods are in transit. Once the goods are received in the buyer’s country, the buyer transfers funds to the issuing bank, who then delivers the bill of lading document to the buyer, who can then take possession of the goods.

Despite these complex safeguards, problems can (and do) arise; a buyer requesting a letter of credit may encounter a number of problems. There is the risk that the buyer’s bank will execute payment when presented with documents which are incorrect or not specified in the letter of credit (i.e., an incorrect or defective bill of lading); or worse: the buyer’s bank is presented with the correct documents, but because of their own error refuse to execute payment.

More common, however, is that all the parties involved (the seller, the buyer, the issuing bank, the advising bank, the freight forwarder, stevedore or another party) all fall into disagreement, resulting in gridlock, with the goods sitting idle, and none of the parties being paid.”

- Phillip Silitschanu

“Freight Coin’s frictionless and scalable architecture utility primarily replaces the antiquated, slow, arduous and costly function of Letters of Credit to be used as a convenient standard currency of exchange and proof of stake for all freight and trade finance related transactions.”

- Marc Ortaliz

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- 1. Letters of Credit**
 - a. Problem
 - b. Solution
- 2. Freight Market**
 - a. Market Size
 - b. Participants
 - c. Standardization of Freight Price
- 3. Freight Coin [\$TKM]**
 - a. Ethereum ERC20 Token
 - b. Blockchain
 - c. Freight Coin Foundation
- 4. Decentralized Autonomous Freight Network DAFN**
 - a. dApp Wallets
 - b. dApp Exchanges & Platforms
- 5. Freight Coin Protocols: DAFN smart contract**
 - a. Service Provider Protocol
 - b. Tokenized Asset Protocol
 - c. Tokenized Contract Protocol
 - d. Tokenized Risk Management Instrument Protocol
 - e. Document Management Protocol
- 6. Freight Coin Use Cases**
 - a. Internetwork Token
 - b. Crowdfunding for Tokenization of Logistic Assets
 - c. Customizable Freight Trade Instrument
 - d. Smart Contract for Freight Risk Management
 - e. Smart Contract non-Performance Default Liquidity
- 7. DAFN Participants**
 - a. CrowdFunders
 - b. Network Suppliers
 - c. Network Consumers
 - d. Service Providers
- 8. Freight Coin [\$TKM] - Token Generation Event objectives**
 - a. Ecosystem Development
 - b. Headquarters
 - c. Founding Team

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1. Letters of Credit

a. Problem: Buyer and Seller dilemma

- i. Peer to peer Trust mechanism. In a commodity trade whereas the transfer of goods can't simply be concluded with an exchange of hands, the buyer and seller have to trust one another that each will perform their respective responsibilities.
- ii. Concurrent payment and delivery of good which is impossible when you are trading between countries of origin and destination.

b. Solution

- i. Freight Coin solves the problem of coincidence of wants
- ii. Financing via letter of credit eliminated
- iii. Hedging freight price risk
- iv. Offering value add cheaper insurance products based on ML data sets
- v. Eliminate paperwork
- vi. Trade Cost is a function of Trust = the lower the trust the higher the costs.
- vii. Neutralize the behemoth trading companies who dominate and monopolize
- viii. Because the marginalized market participants have now access to crowd funded finance and logistics.
- ix. DAFN allow operators to enter as participant as managers of the logistic assets in the network

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2. Freight Market

The Global Freight Market has a \$13 Trillion addressable market. The crude oil, refined products, and chemical Tanker Freight Market has an addressable size of \$3.5 Trillion. We are focusing on the long tail of users such as SME MME small scale commodity producers, as they are the underserved market and ignored by the large financial institutions unwilling to issue them a Letter of Credit line. Countries in South East Asia, Central Asia, South America, Central America, Africa have a high net import and export percentage relative to their GDP. 7/10 top 10 ports are in China. 14/20 of the busiest ports are in East Asia.

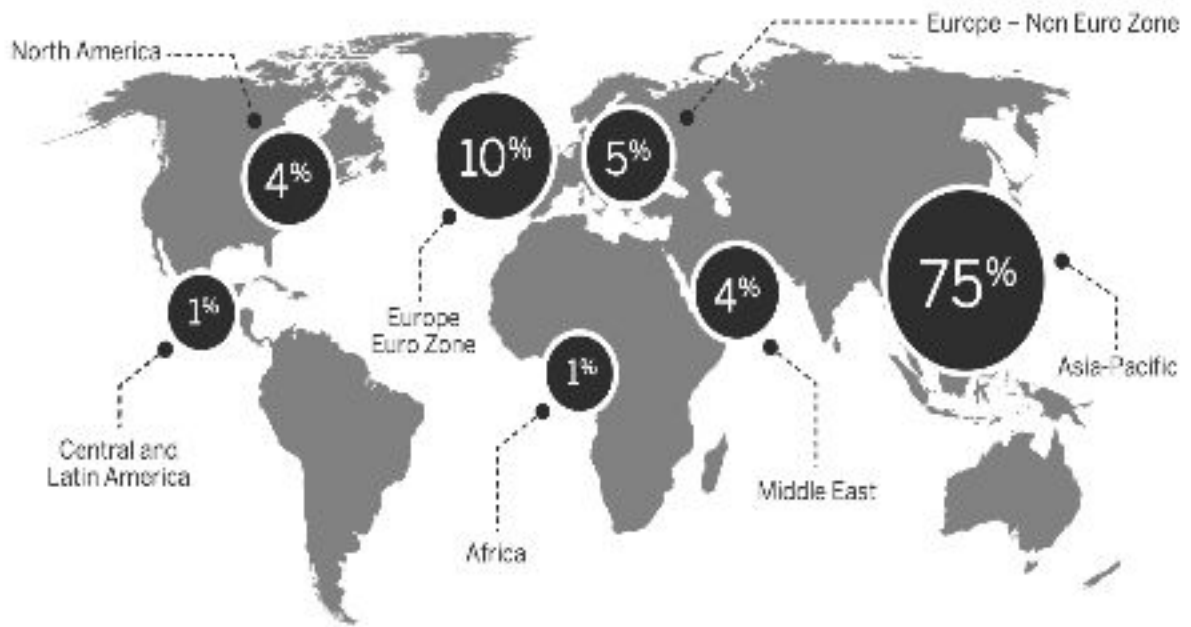
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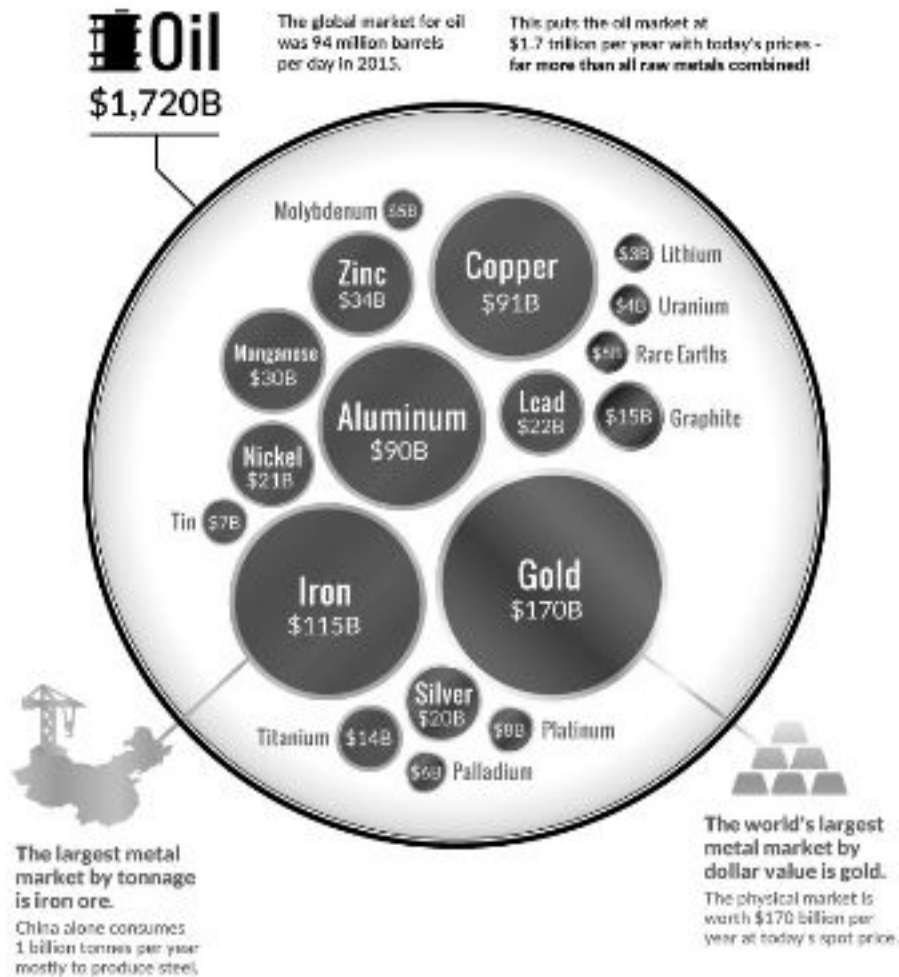
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BIG OIL

The oil market is bigger than all raw metal markets combined



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Rank ↕	Port ↕	Jurisdiction ↕	2015 ^[1] ↕
1	Shanghai	 China	36,516
2	Singapore	 Singapore	30,922
3	Shenzhen	 China	24,142
4	Ningbo-Zhoushan	 China	20,636
5	Hong Kong	 Hong Kong SAR	20,073
6	Busan	 South Korea	19,469
7	Qingdao	 China	17,323
8	Guangzhou	 China	17,097
9	Jebel Ali (Dubai)	 United Arab Emirates	15,585
10	Tianjin	 China	13,881
11	Rotterdam	 Netherlands	12,235
12	Port Klang	 Malaysia	11,887
13	Kaohsiung	 Taiwan	10,264
14	Antwerp	 Belgium	9,654
15	Dalian	 China	9,591
16	Xiamen	 China	9,215
17	Hamburg	 Germany	8,821
18	Tanjung Pelepas	 Malaysia	8,797
19	Los Angeles	 United States	8,160
20	Long Beach	 United States	7,192

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Total RICI Index			
Rogers International Commodity Index®			
Contract	Exchange	Currency	Initial Weight
Crude Oil	NYMEX	USD	16.00%
Brent	ICE EU	USD	13.00%
Wheat	CBOT	USD	4.75%
Corn	CBOT	USD	4.75%
Cotton	ICE US	USD	4.20%
Aluminum	LME	USD	4.00%
Copper	LME	USD	4.00%
Soybeans	CBOT	USD	3.50%
RBOB Gasoline	NYMEX	USD	3.00%
Natural Gas	NYMEX	USD	5.00%
Gold	COMEX	USD	5.00%
Soybean Oil	CBOT	USD	2.00%
Coffee	ICE EU	USD	2.00%
Silver	COMEX	USD	4.00%
Zinc	LME	USD	2.00%
Lead	LME	USD	2.00%
Live Cattle	CME	USD	2.00%
Heating Oil	NYMEX	USD	1.80%
Platinum	NYMEX	USD	1.80%
Gas Oil	ICE EU	USD	1.20%
Sugar	ICE US	USD	1.00%
Wheat	CME	USD	1.00%
Milling Wheat	EURONEXT	EUR	1.00%
Cocoa	ICE EU	GBP	1.00%
Tin	LME	USD	1.00%
Lean Hogs	CME	USD	1.00%
Rubber	TOCOM	JPY	1.00%
Lumber	CME	USD	1.00%
Rapeseed	EURONEXT	EUR	1.00%
Nickel	LME	USD	1.00%
White Sugar	ICE EU	USD	1.00%
Rice	CBOT	USD	0.75%
Soybean Meal	CBOT	USD	0.75%
Orange Juice	ICE US	USD	0.60%
Oats	CBOT	USD	0.50%
Palladium	NYMEX	USD	0.30%
Milk Class III	CME	USD	0.10%

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Components of Freight Trade

1. Finance

- a. Bank Facility
- b. Capital
- c. Foreign currency exchange
- d. Customs Duties Taxes
- e. Escrow
- f. Opaque Pricing

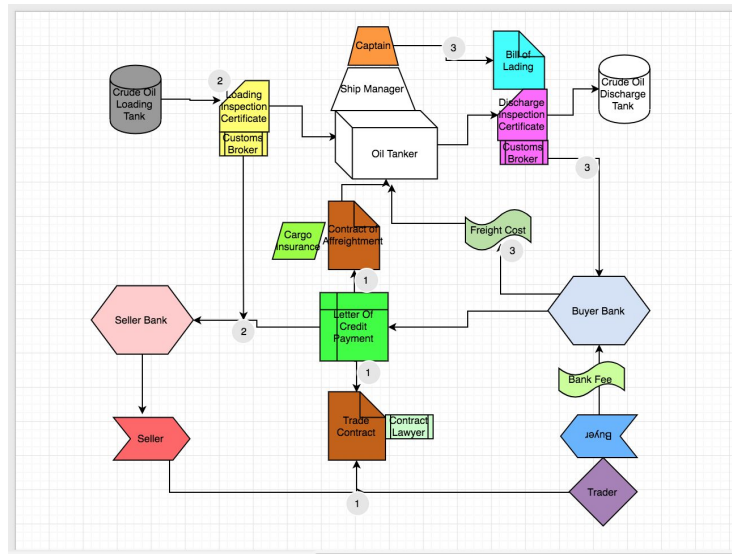
2. Logistics

- a. Delivery default risk
- b. Language
- c. Intermodal Logistics
- d. Opaque Pricing
- e. Fragmented Service providers(ship truck rail)

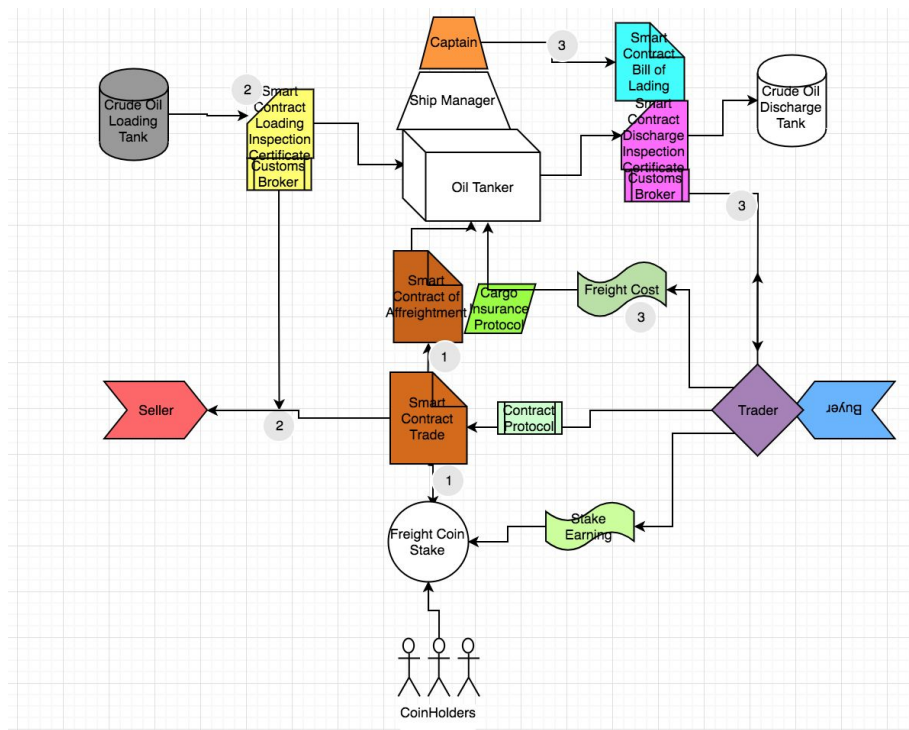
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Traditional Trade Finance Topology



Freight Coin Trade Topology



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3. Decentralized Autonomous Freight Network DAFN

Our coin and contract will be hosted on multiple blockchains for diversification and hedging our survivorship risk of these companies.

d. dApp Wallets

- i. Ships Seafarers: Seaspeak
- ii. Traders: Oil Trader App
- iii. Others

e. dApp Exchanges & Platforms

- i. DAFN
- ii. Bancor
- iii. Radar Relay
- iv. Etherdelta
- v. Kyber
- vi. Waves
- vii. Binance

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4. Freight Coin [\$TKM]

Standardization of Freight denomination need to take place so freight rates can be can be quoted uniformly much like crude oil is denominated in US dollars per barrel or electricity in kWh. We shall adopt the ton-kilometer (TKM) denomination as it is the most commonly used.

A **tonne-kilometre**, abbreviated as tkm, is a unit of measure of freight transport which represents the transport of one **tonne** of goods (including packaging and tare weights of intermodal transport units) by a given transport mode (road, rail, air, sea, inland waterways, pipeline etc.) over a distance of one **kilometre**.

Ton Km	type
\$0.06	water
\$0.23	truck
\$0.02	rail
\$2.88	air

We are issuing a total of 1,000,000,000,000 TKM tokens at an offering price of

1 TKM =

0.001 USD

0.000001538461538 ETH

0.00000007142857143 BTC

Smart tokens introduce multiple advantages over the traditional exchange model:

1. Continuous Liquidity - Since purchasing and liquidating is done through the smart contract, smart tokens are always liquid, irrespective of their trading volume.

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2. No Extra Fees - The only mandatory fees applied by a smart token are the blockchain platform fees (gas) which are relatively low.
3. No Spread - Since the price calculation is done algorithmically by the smart token, the same price applies for purchasing and liquidating the smart tokens.
4. Predictable Price Slippage - Smart tokens allow pre-calculation of the precise price slippage, based on the transaction size, before it is executed.

5. Freight Coin Protocols

Freight Coin Protocols: DAFN smart contract

- f. Tokenized Asset Protocol
- g. Tokenized Contract Protocol
- h. Tokenized Risk Management Instrument Protocol
- i. Service Provider Protocol
- j. Document Management Protocol

We are open sourcing the protocols for 3rd party developers to build various freight related protocols for risk management , real time satellite location tracking, security , asset management , compliance , purchase and sale smart contracts, asset crowd funded fractional ownership, all paid in TKM.

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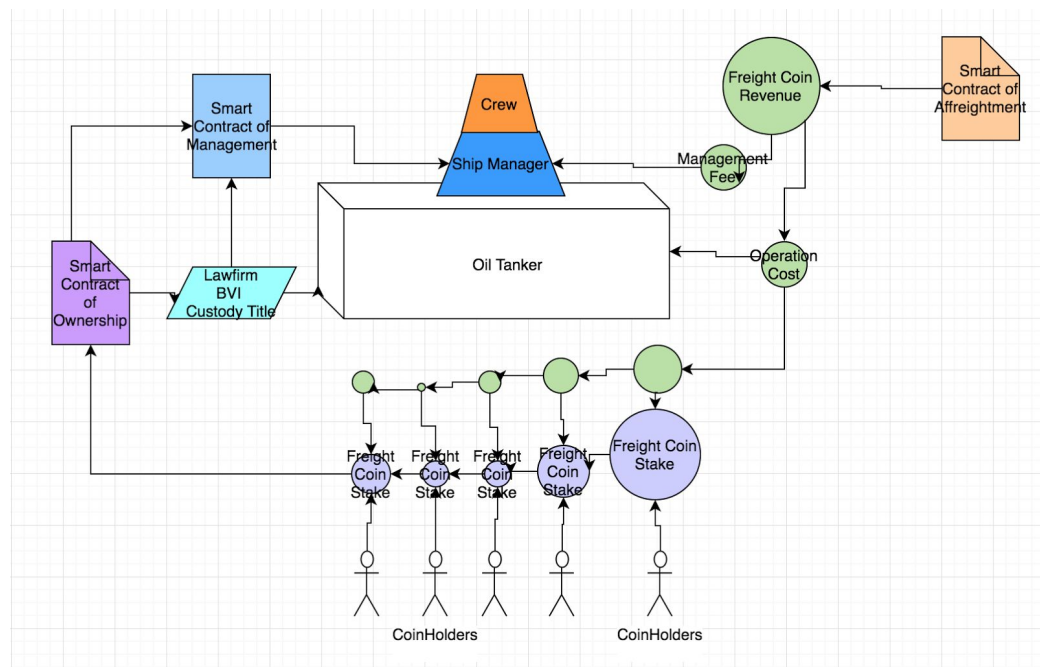
6. Freight Coin Primary Use Cases

a. Proof of Stake Trade Finance

Barrels	100,000.00
Trade Value	\$7,000,000.00
Coins Staked TKM	7,000,000,000
Days to Stake	7
Coins Earned TKM	105,000,000
Coin Percent	1.50%

i.

b. Fractional Ownership of Oil Tankers Freight Income Earning



i.

c. Freight Rate Indices

1. Shipowners, sailors, and anyone can now own ships financed through crowd funding from Freight Coin and distribute earnings to the fractional coinholders.

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2. Shipowners can earn via hosting Masternode mining rigs...(their ships cannot drydock complete shut down even without any cargo drydock)
3. Trading of transportation assets will be liquid as the asset are now tokenized.
4. Tanker owners can sell their freight contract at a discounted long term time charter. Coinholders can then resell it back on the spot market.
5. Performance default of tanker owners is now a non issue. Let's say their tanker somehow sank prior to the contracted voyage. They can purchase another contract or resell their contract back into the market.
6. The Philippines, India, Pakistan sailor demographic account for 60% of the global manpower. They remit back to their family monthly \$3 billion of their salary most of it in its entirety. They are currently being charged up to 10% in exchange rate and delivery fees. Using our wallet, the sailors can get paid in TKM and we can partner local remittance companies for the last mile delivery to their families.

7. DAFN Participants

Who are the initial users of the coins?

1. Oil Tanker owners
2. Individual Independent Traders
3. Small Trading Firms
4. Shipping Companies
5. Commodity Trading Companies
6. Financial Hedgers
7. Any company who needs to manage their freight rate risk
8. Coin speculators investors seeking to diversify in a stable coin with actual earning streams.

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Price	\$0.001		1,000,000,000,000		Per address	
Effective Price	Stage	bonus	15% of total supply	Total	Min	Max
\$0.00050	Presale 1	100% bonus	40,000,000,000	\$20,000,000	\$1	\$1,000,000
\$0.00059	Presale 2	70% bonus	25,000,000,000	\$14,705,882	\$1	\$100,000
\$0.00067	Presale 3	50% bonus	15,000,000,000	\$10,000,000	\$1	\$100,000
\$0.00071	ICO stage 1	40% bonus	30,000,000,000	\$21,428,571	\$1	\$10,000
\$0.00077	ICO stage 2	30% bonus	20,000,000,000	\$15,384,615	\$1	\$1,000
\$0.00083	ICO stage 3	20% bonus	20,000,000,000	\$16,666,667	\$1	\$1,000

8. ICO Objectives

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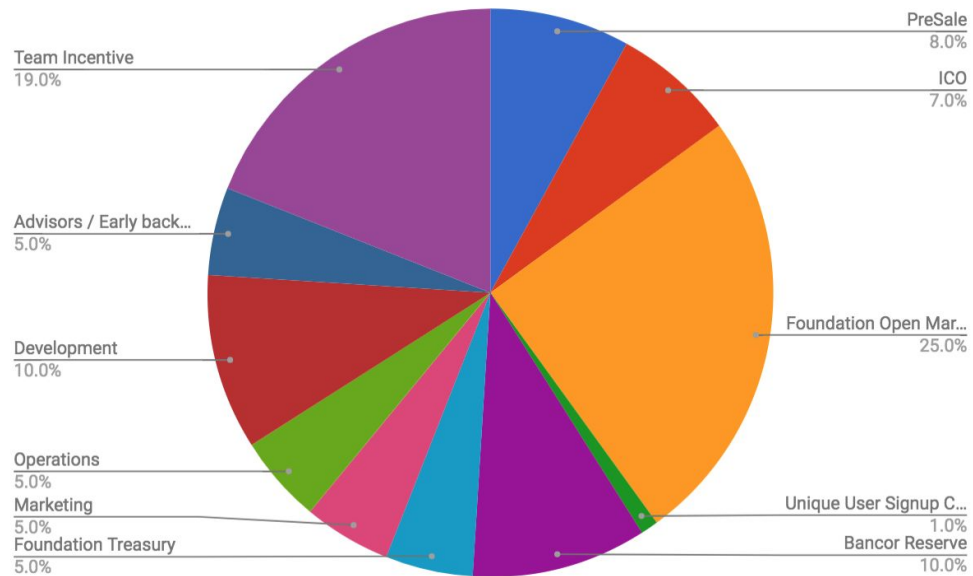
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Total Supply	1,000,000,000,000	%
PreSale	80,000,000,000	8%
ICO	70,000,000,000	7%
Foundation Open Market Sales	250,000,000,000	25%
Unique User Signup Civic	10,000,000,000	1%
Bancor Reserve	100,000,000,000	10%
Foundation Treasury	50,000,000,000	5%
Marketing	50,000,000,000	5%
Operations	50,000,000,000	5%
Development	100,000,000,000	10%
Advisors / Early backers	50,000,000,000	5%
Team Incentive	190,000,000,000	19%
Total Supply	1,000,000,000,000	100%



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1. A portion of the funds will be used to develop, promote and support the open-sourced, blockchain-agnostic, Freight Coin protocol implementations, and support related technologies and applications such as an open-source, user-friendly web service (desktop and mobile) to provide wallet, marketplace, token-conversion, new smart token creation and crowdsale solutions.
2. A portion of the funds will be used to set-up and propel the first batch of token changers for popular ERC20 tokens, which function as a decentralized solution for token exchange between all the included tokens. This model introduces key advantages, incentivizing asset tokenizers to represent additional real-world assets as Ethereum tokens.
3. A portion of the funds will be used to participate in and support innovative and promising future smart token crowdsales in the DAFN. These may include new, location-based and vertical-specific smart token initiatives such as regional token networks, community currencies, crowdfunded projects and other online or offline token-based ecosystems that support or integrates with DAFN.
4. Vesting schedule of Board Incentives and Team Incentives are paid for by recipient at \$0.001 same strike price as everyone else at ICO
5. Freight Coin Foundation administers the Foundation's Treasury TKM holdings and is responsible for distributing all the coins to every person in the world. Management of Treasury Assets contributed to the Foundation will primarily be diversified with the following components of 20% gold , 40% (Top 5 fiat: USD, EUR, CHF, JPY, RMB), 40% (Top 5 cryptocurrencies: BTC, ETH, LTC, XRP, TKM).

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Governance

Office Locations

1. Zug, Switzerland - Corporate HQ
2. San Francisco, USA - Engineering
3. Shanghai, China - Shipping
4. London - Ship Brokering
5. Singapore - Trade
6. Manila Philippines - Manpower & Call Center

Executive Team

Marc Ortaliz

CEO & Founder

After studying International Finance at Virginia Tech from 1997-2001, he ventures into entrepreneurship applying his obsession with the financial markets leading him to start a Quantitative Hedge Fund strategy from 2002-2006 with Bradford Cross. An opportunity to deal physical petroleum in 2006 from Singapore to the Philippines brought him to charter oil tankers to transport Diesel fuel. In 2011, the Eagle Ford shale revolution in Texas began its exponential production of crude oil which secured a transportation contract from Trafigura for Crude Oil Tankers until the pipelines were in place in late 2016. Synthesizing his experience in financial market trading and transporting crude oil fuses Ethereum's blockchain technology to establish Freight Coin.

Tom Boyles

Chief Technology Officer

Tom has been designing and implementing AI/machine learning systems since 2000 in a variety of fields including medicine, finance, social, crypto. For the last few years I've focused on building investment and trading technologies for main markets, early stage investment and crypto. 10+ years in LM/AI applied to finance, investment, hedge funds, quant. 4+ years crypto and 3 years on trading algos in this space. Co-founder/early employee in 10+ startups, with exits between \$25M – 500M 24+ years

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management experience building companies across industries, environments and languages; 20+ architecting high scalable multi-lingual A.I.s, applied to medicine, news, audio/video in finance, and intelligence gathering. PhD, Oxford University (Maxillofacial surgery, Clinical Medicine), Degree, Oxford University (Math & Computer Sci)

Zarina Korolova

Chief Operating Officer

Performing a multitude of roles in various capacities such as compliance, regulatory, strategic, and investor relations , she has successfully raised funds for every start-up to-date, one of which went on to be acquired. She currently serves as Head of Compliance for Crowdestates, Board Member of Caerus Investment Management, Board Member of Voxster, Russia and CIS Manager at the London Stock Exchange working closely on the IPOs of Lukoil and Gazprom of Russia.

After studying law at Warsaw University of Poland, Zarina managed to acquire simultaneously two law degrees Kings College of London, BPP Law School. She is fluent in English and Russian.