POLARIS SHARE

Decentralized and Incentivized Knowledge Trading System

Version 1.1

Disclaimer

This White Paper states the current views of the team to launch the polaris share 1.1 project (hereinafter "the Team"). The Team may from time to time revise this White Paper in any respect without notice. The information presented in this White Paper is indicative only and is not legally binding on the Team or any other party. Please note that this White Paper has not been reviewed by a legal advisor.

Contents

POLARIS SHARE

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01   Executive Summary

1.1 Problem   Unutilized knowledge incurs inefficient and redundant work

▶ A vast number of documents containing important information are unutilized in the Cloud or on hard drives. Many knowledge creators cannot find nor access proper knowledge and end up working on the same subject..

▶ Knowledge creator are losing the chance earn more by sharing and selling their knowledge.

1.2 Vison   Decentralized and Incentivized Professional Knowledge Trading System

Similar to Slideshare but,

▶ POLARIS SHARE returns the value of knowledge stored in documents and network to Knowledge Creators and other users.

▶ Knowledge Creators get rewards from sharing or selling documents on POLARIS SHARE with no or with low transaction fees.

▶ Content is curated by Voters who are any token holders instead of a centralized company.

▶ Audiences will benefit from more and better content shared by Knowledge creators

1.3 Strategy   Rapid User & Document Acquisition • Organizing Contents to be accessible

▶ **User Acquisition**: We plan to utilize 85 million Polaris Office users, who own about 1 billion documents, as the priming water. To settle these active users and their documents in the knowledge ecosystem, we plan to give bounty 3% of the total amount of tokens that will be issued.

▶ **Document Acquisition:** In the early stage of the system, users get rewards from the inflation of Tokens, reduced by half, every year. When system grows with more users and content, unit price of the token will be higher and users also get rewards from contextual advertising. (Slideshare ranks currently top 159 site of the world in terms of traffic by Alexa)

▶ **Organizing Contents:** Identifying better documents is critical success factor with more and more documents shared. Curators vote on documents by vesting tokens for 4 weeks and documents with more votes are considered to be better documents. During the vested 4 week period, curators get better rewards if documents they voted on become popular with more traffic and sales. It motivates curators to find better documents.

1.4 Core Team Member   Global Internet Service Experts Group

▶ They are core members of INFRAWARE, which was established in 1997 and is a company listed in KOSDAQ. They achieved a big growth with their unique challenging spirit even though they had faced industry paradigm shifts many times in the last 20 years. Especially, they are the global Internet service experts who made Polaris Office™ which has 85 million users.

CEO Eddie M. Kwak

• Current CEO of POLARIS SHARE
• Current Chairman of Selvas Group
• Founder of INFRAWARE(KOSDAQ Listed)
• Master of Computer Engineering / Hankuk University of Foreign Studies
He founded INFRAWARE in 1997 and created the Polaris Office for 100 million people around the world. Currently, it also holds the chairmanship of the two-listed Selvas Group.
Starting with infrastructureware, Selvas Group declared its launch as a group company in 2017.
The Selvas Group currently has office software, artificial intelligence, digital healthcare, Uwellness, mobile games and more. It is continuing its growth through innovation in the domestic IT industry

COO Saint Y. Sung

• Current COO of POLARIS SHARE
• Former Vice President of YAP Company
• Former COO MCOM
• He is a service planning expert who has been planning and launching numerous services in the IT industry for more than 20 years.
 Since 2010, he has launched Smart Wallet (currently Syrup, CLIP, etc.) services centering on the O2Oplatform business, and based on this, he has launched various services through Smart Wallet consulting to mobile communication companies and financial companies.
 He joined the POLARIS SHARE project as COO after serving as vice president of location-based consum ption platform YAP.

Advisor Miles H. Lee

• Current CEO of INFRAWARE(KOSDAQ LISTED)
• Former CFO of Selvas Healthcare(KOSDAQ LISTED)

- Strategy Planning Manager of INFRAWARE
- Lead Engineer of Mobile Browser Development
- Manager of Browser Sales Team
- Computer Science, Yeonsei University

CGO Richard S. Yoon

- Current Vice President of Selvas Group
- Former Softbank Finance group
- Former Merrill Lynch International
- Vocal Department, Seoul National University

CTO Jay J. lee

- Current CTO of POLARIS SHARE
- Big Data, Cloud, Middleware Engineering & internet service application architecting
- Master of Information and Communication / Soongsil University

1.5 Token Distribution

▸ Symbol: POLS
▸ Total Tokens: 10,000,000,000
▸ Type: ERC 20
▸ Allocations:

- Token Sale 25%
- Infraware Partner 5%
- Consensys Foundation 2.5%
- POLARIS SHARE Foundation 10%
- POLS Ecosystem 25% (Airdrop 12% + Reward Pool 21%)
- Reserved 7%
- Marketing 5%
- Strategic 4%
- Team 15%
- Advisor 1.5%

02 Overview

2.1 Definition of POLARIS SHARE

(AS-IS)
hired + possessed

(TO-BE)
connections + share
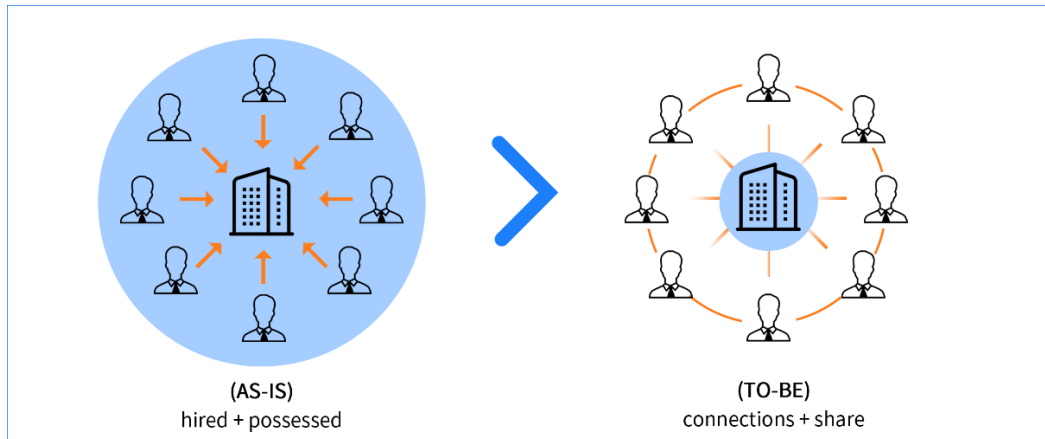
▶ Companies in the past "hired" employees and "possessed" assets to solve problems and provide services. But due to the development of information technology, the diversification of employment structure, and the pursuance of higher productivity, companies nowadays solve the problems more globally and grow faster by "connecting" resources instead of directly hiring employees and possessing assets. For example, Uber, unlike any other taxi companies, provides a passenger transportation service in 65 countries through 7,500 drivers without hiring one single driver, and AirBnB offers more than 4 million accommodations without owning any building or hiring a service staff. These are the cases that the higher efficiency is achieved by connecting through incentives people to cars or real estates that are not sufficiently utilized.

We call such decentralization of a company through "connections" "POLARIS SHARE" We would like to create an environment where a company can work with people with the most appropriate skills around the world without hiring them and individuals can work at the time and space they want and get the proper compensation without being affiliated to a certain company. Especially, we realized that a lot of knowledge and knowledge creators are not sufficiently utilized, and, to solve this problem, we plan to create Decentralized and Incentivized Knowledge Trading System - POLARIS SHARE as the first step.

2.2 Problem

1,000 TB, 1Billion Documents

0.5 million Documents
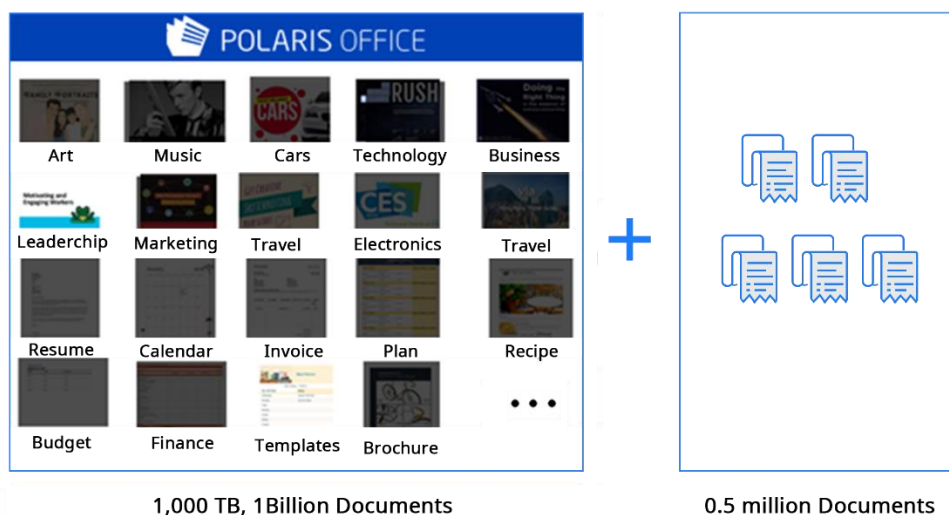
▶ We are operating a cloud office service called Polaris Office. About one billion documents have been created or uploaded in this platform for the last four years, and over 500,000 new documents are being created or uploaded every day. These documents contain the knowledge of various subjects, and some of them contain very high level of knowledge. But most of these documents are only utilized at the time of the creation, and

they don't get utilized even though they are stored in the cloud. We discovered that less than 2% of documents are utilized when one month passes after their creation, which means huge amount of documents and knowledges are not utilized and just take up space in the storage if you include the documents that are only stored in a hard disk and not uploaded in the cloud.
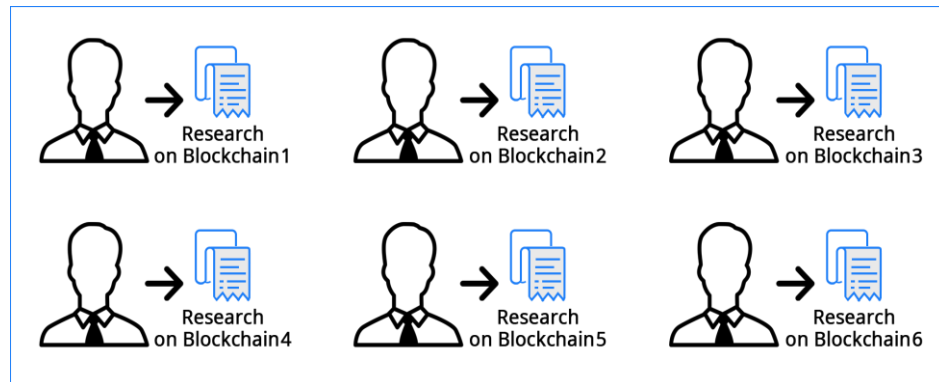
▶ It is not just a matter of wasting the storage capacity. Many people work repetitively to create documents of the same subject, and in most cases, people have insufficient experiences and capabilities on the subject, resulting in creating documents that contain low-quality information or even wrong information after spending even more time. It is certainly a big waste.

▌ Note Polaris Office Service (https://www.polarisoffice.com)

Polaris Office Service, which is a foundation for the POLARIS SHARE project, is a cloud office service that is compatible with the MS Office and Adobe PDF. It can be run on various platforms such as Windows, Mac, iOS, and Android, and it supports various document formats such as Word, Excel, PowerPoint, PDF, and TXT. It has about 1 Billion subscribers worldwide, and about 50,000 users are newly joining every day. The users are from over 230 countries worldwide including USA, Japan, India, Mexico, and Russia.

2.3 Solution
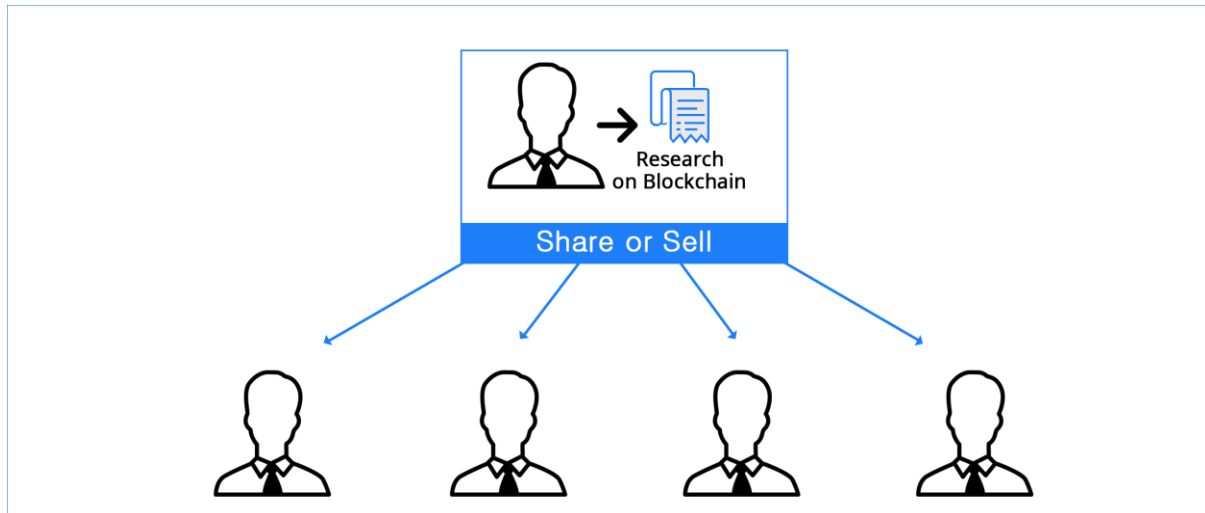
▶ We intend to solve this problem by connecting a knowledge creator and an audience. In other words, we would like to solve this problem by providing a system where an expert of a certain subject can create a document and share or sell it. Especially, we plan to implement the system through a token economy system based on block chain so that the knowledge creator who creates the document can get compensated. The system that is implemented this way provides a way for an expert of the related subject to create a document and share or sell it. Although it is similar to SlideShare™ service, it will be a "decentralized" and "incentivized" system.

Item	Slider share ™	POLARIS SHARE
Supported Format	Power point	Word, Exel, Powerpoint
BM	Free	Free, Charged
Creator Reward	No	Yes
Curation	By Company	By User

▶ The biggest difference between this system and SlideShare™ is that this system provides the knowledge creator with the compensation. In the case of SlideShare™ , which does not provide the compensation, many documents are created for the marketing purposes to obtain the influence to leverage, which means, in many cases, the documents contain information biased for the business of the author. But POLARIS SHARE not only provides the motivation to share more knowledges by providing the compensation through tokens but also raises the possibility that more pure information would be contained in the document. Also, whereas the curation of SlideShare™, which includes the search ranking and the determination of documents to be exposed on the main page, is done by the company and the algorithm that the company created, meaning that the exposure of the knowledge is influenced by the company, POLARIS SHARE pursues the curation based on the quality of the document by returning the curation authority to the users.

▍Note SlideShare™ Service (https://www.slideshare.net/)
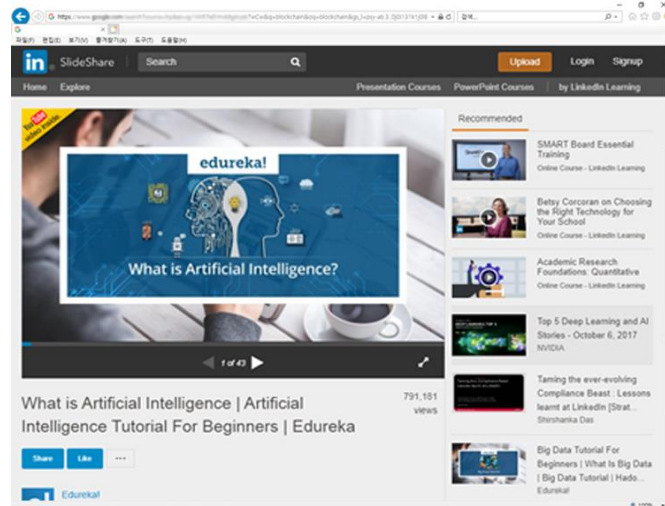
SlideShare™ is a service that is provided by Microsoft. It is a knowledge sharing service that is established in 2006 and currently used by about 80 million users. About 18 million documents are currently being shared as it offers the function to easily share the documents that are created through the slide-producing software such as PowerPoint. It is a popular service with the traffic volume that ranks 160th worldwide according to Alexa.

2.4 Beyond POLARIS SHARE

▶ Even though a document is the most important and refined form of the medium that transfers the knowledge, the knowledge exists and is transferred in various other forms such as an instant message, a video conference, joint editing, and human network. POLARIS SHARE project will be developed into a cooperation environment for decentralized companies as various cooperation tools that are created by the POLARIS SHARE project team and 3rd party teams would be connected to the platform in later time. For example, the person who has shared many high quality documents in the knowledge trading system can be trusted as an expert in the related area, and can be included in the human network and the recruitment information service. Beyond that, POLARIS SHARE can be expanded to become a system that solves the problems truly through the "connection" instead of the "employment" by paying a certain amount of tokens in return for having a video conference with an expert for 1 hour or getting own document reviewed through the joint editing.

Note Acquisition of LinkedIn and SlideShare™ by Microsoft
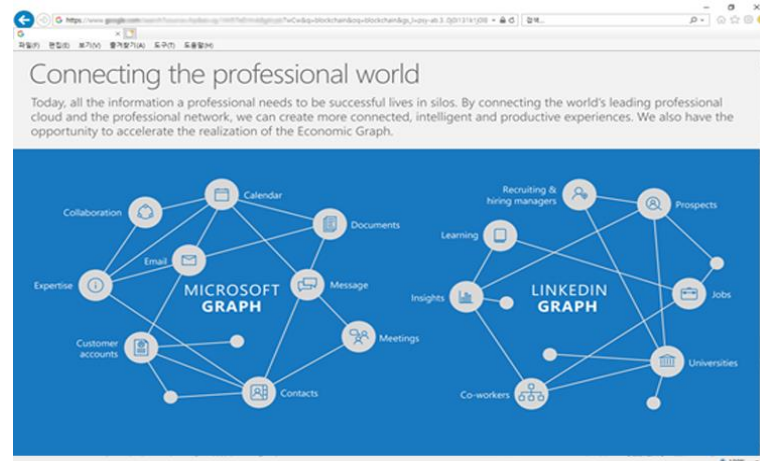
LinkedIn[TM], which provides a personal history and connection management service, acquired SlideShare[TM] in 2012, and Microsoft acquired LinkedIn[TM] at USD 26.2 billion in June 2016. Through this acquisition, Microsoft estimated that the total addressable market would be increased by 58% from USD 20 billion for the existing Office software to 315 billion through the synergy effect with its own Office software. Experts said that the productivity would be increased and the vision of "Connecting the professional world" could be realized by connecting through the cloud service, etc. In fact, Microsoft recorded the sales of about USD 5 billion from LinkedIn and SlideShare in 2017, and it is rapidly growing.
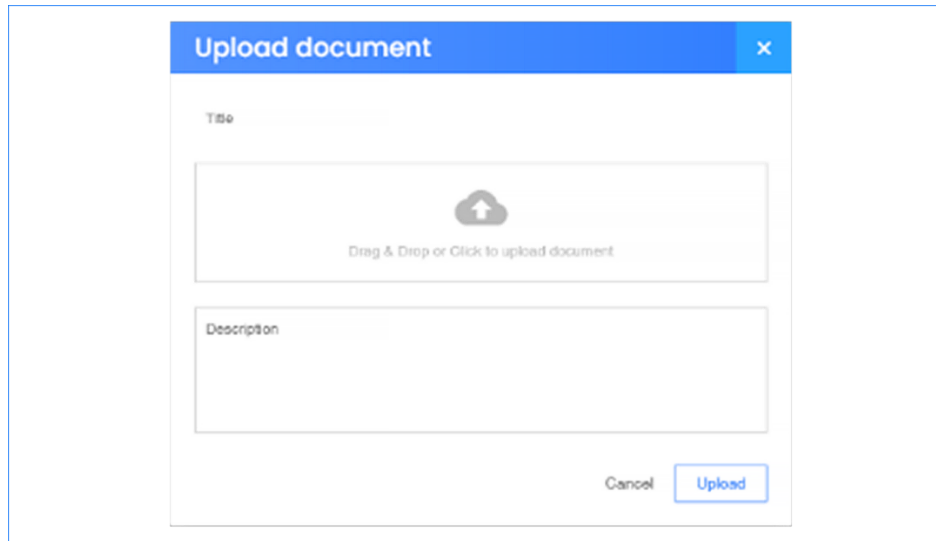
03 POLARIS SHARE Service

3.1 Overview

▶ POLARIS SHARE service is a decentralized and incentivized knowledge trading system that connects a knowledge creator and an audience. This project goes beyond a simple document sharing service by grading the value of the knowledge and trading them so that the knowledge creators can get the compensation and the audience can get higher quality knowledge at a low cost.

3.2 Service and Selling Documents

3.2.1 Sharing and Selling Documents

▶ A knowledge creator can directly upload various formats of documents such as Word, Excel, PowerPoint, and PDF that are created with various document-creating software including Polaris Office. Not only the documents that contain the knowledge on a specific subject, but also various documents such as an Excel file that contains various forms and formula for solving certain problems can be uploaded. The documents can be shared for free or sold at the predefined price according to the decision by the knowledge creator.

3.2.2 Finding documents

The document that is uploaded in the POLARIS SHARE would be passed to the audience through various paths. The major paths include the exposure on the main webpage, the navigation through the categories, the search within the site and the related contents, the external search, the reference link, and the embedding in some other sites.
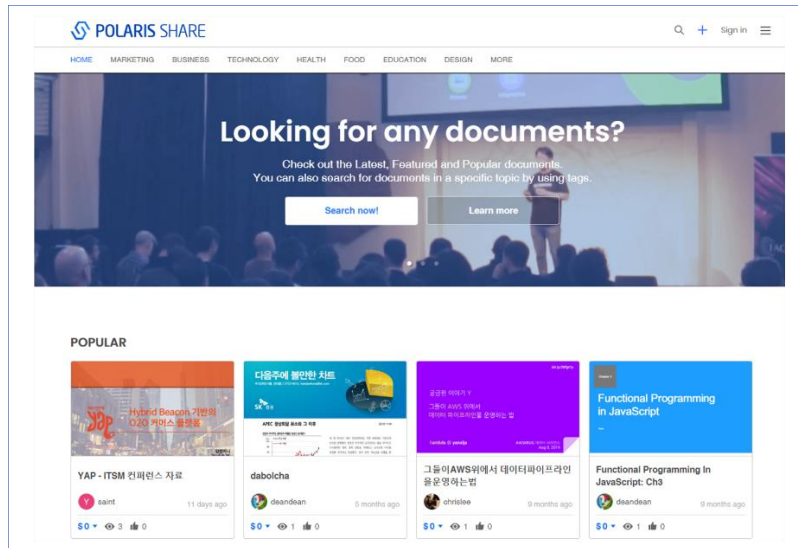
On the main webpage, not only certain knowledge is displayed but also the recent popular documents can be searched. Or the necessary documents can be searched by specifying the category.
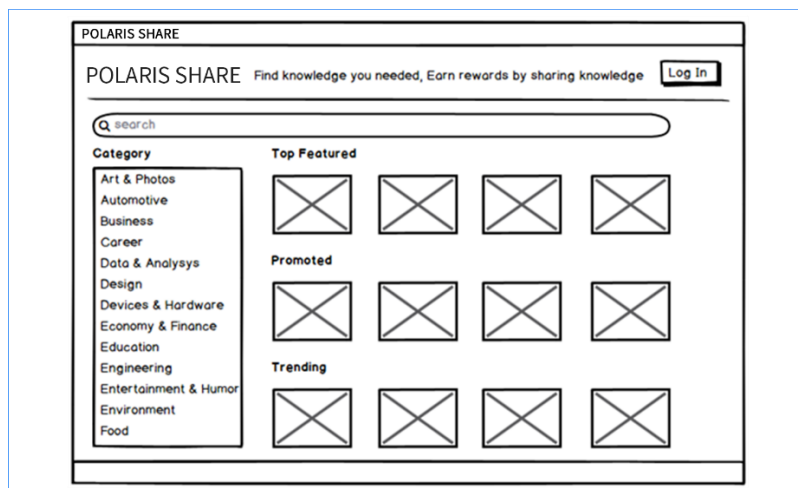
As for the search within the site and the related contents, the users can search for the knowledge related to a certain keyword or find the documents that are highly related to the documents they are currently viewing.
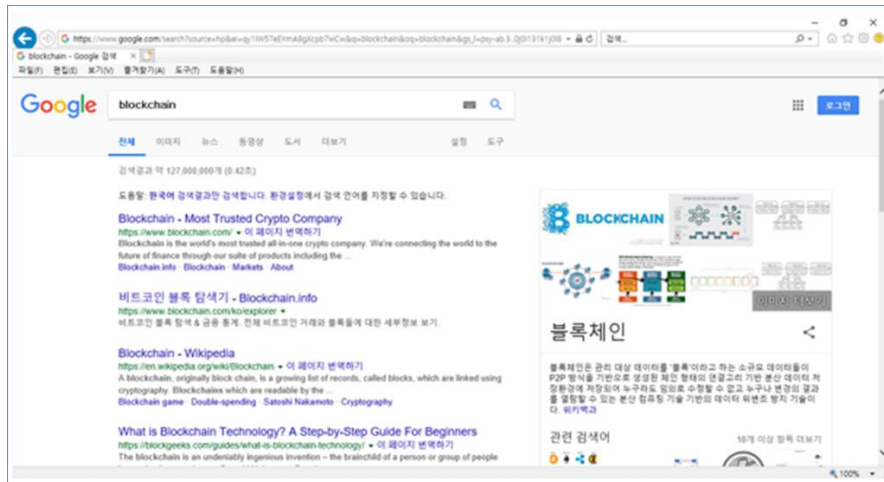
Documents that are uploaded in POLARIS SHARE are optimized for the search engines so that they can be exposed in the major search sites such as Google and Yahoo. If documents on various subjects are uploaded in the POLARIS SHARE, the documents can be searched by major search engines and can attract more users.

3.2.3 Viewing and Voting documents
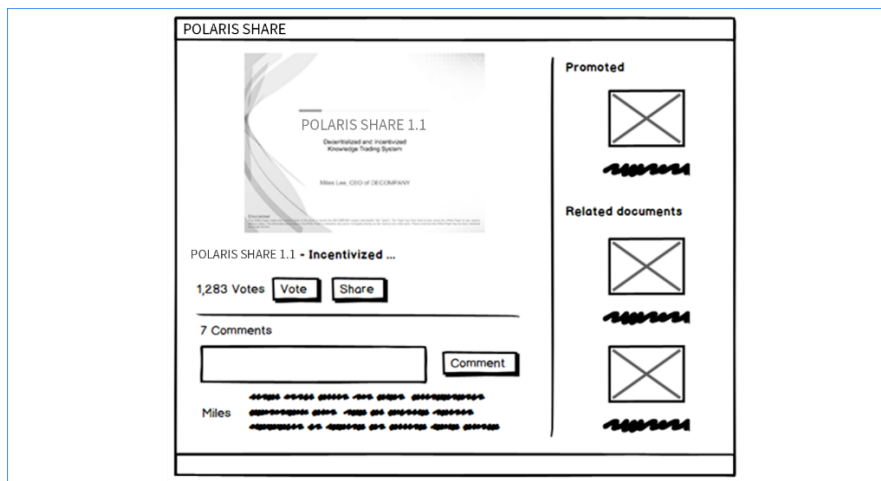
Audience of POLARIS SHARE can read shared documents, put comments, or evaluate the documents by voting. These results are used to increase the possibility of exposure of the content in the site by affecting the selection of the documents to be exposed on the main webpage, which is described in section 3.2, the sorting order of the search results, and the possibility of exposure in the related contents. The detailed logic will be explained in later section.

3.2.4 Rewards to Knowledge Creator
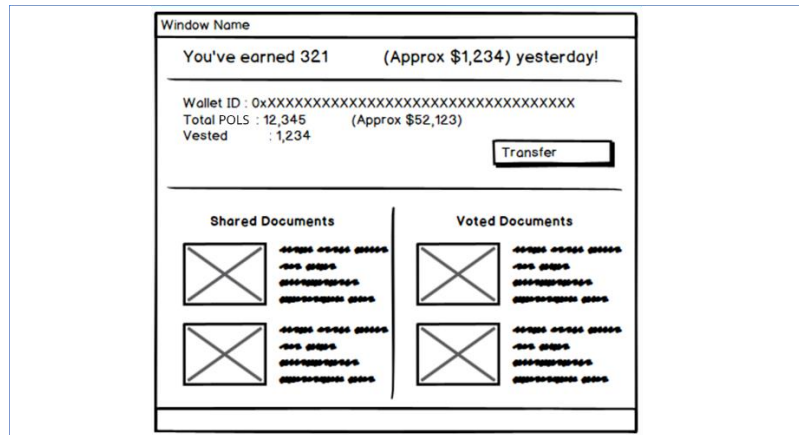
The knowledge creators and other contributors get the compensation according to their contribution. The activity that can contribute and the compensation logic based on contribution will be explained in later section.

3.3 Token Economy

3.3.1 Participants

i. Knowledge Creator

A knowledge creator refers to a person who produces a knowledge and discloses the documented knowledge for free or sell it on the platform of the POLARIS SHARE project. The knowledge creator gets the corresponding compensation as the reward for disclosing the knowledge, and it is evaluated by curator (collective intelligence).

ii. Audience

An audience is a person who searches for knowledge, and views it for free or purchases it.

iii. Curators

If many knowledge creators disclose many documents on the platform, there would be too many documents on the same subject. If it is impossible to identify which document is more suitable and better, we may face the situation that the information we need can't be found due to the excessive number of information. The POLARIS SHARE project plans to build the mechanism that can identify which document is better among the similar documents by adopting a collective intelligence system that is backed up by financial incentives.

A curator refers to a person who expresses an opinion using tokens they own and gets the compensation for the activity they perform as a member of a collective intelligence.

iv. Validators

This project has the mechanism of identifying the quality of documents through many and unspecified curators by offering financial incentives. But there may be a case of an abuse. A curator or a knowledge creator may attempt to abuse the platform with a lot of tokens for financial or non-financial reasons.

A validator shares the same interests with the POLARIS SHARE project, and the validator, as a member who is approved by the foundation, has the authority to limit the use of tokens by the knowledge creator or a curator who tries to abuse the platform. Although it is basically an honorary position, a certain amount of coins can be provided based on the decision of the foundation.

v. Foundation

They are composed of founders of the POLARIS SHARE project and people with a good reputation who are designated by the founders, if necessary. They take the role of establishing and approving various policies in POLARIS SHARE.

3.3.2 Rewards Pool

The reward pool is composed of inflation of the tokens and other revenues like transaction fees and contextual

advertising on the knowledge keyword. The basic operation cost such as the cost for the server, network usage fee (gas price) of the block chain platform, and other operational labor cost will be deducted from the reward pool.

$$\text{Reward Pool} = \text{Inflation of Token}$$
$$+ \text{ Transaction Fee}$$
$$+ \text{ Ads Revenue}$$
$$- \text{ O peration Cost}$$

The amount of tokens for the reward pool is 12% of total token issuance amount. 6% of tokens will be inputted in the first year of the service operation, and it will be halved every year, 3%, 1.5%, 0.75%, ... of tokens being inputted every year

$$\text{Inflation of the Token of nth Year} = 12 * \left(\frac{1}{2}\right)^n$$

$$\text{Total Inflation of the Token} = 6 * \frac{1}{\left(1 - \frac{1}{2}\right)} = 12$$

In order to gather high quality users and documents, a half of the tokens the reward pool possesses will be inputted in the first year of the service operation. Since the contextual advertising profit based on knowledge keyword and the fees from the sale of a knowledge would increase once the sufficient number of documents and users are gathered on the platform, the platform is configured in a way that the tokens get halved every year. If the usability and the value of tokens get higher, the price of the token would also be raised. If that's the case, even lesser tokens would be the sufficient compensation.

3.3.3　Rewards Pool

There are two components that are needed in order to establish the knowledge ecosystem. Those are sufficient knowledge creators and documents. These two components are the core assets that Polaris Office possesses. As of 2Q of 2018, Polaris Office has about 85 million users. It is a very active service platform with about 10 million MAU (Monthly Active User), and about 50,000 users are steadily flowing in daily even without a particular digital marketing.
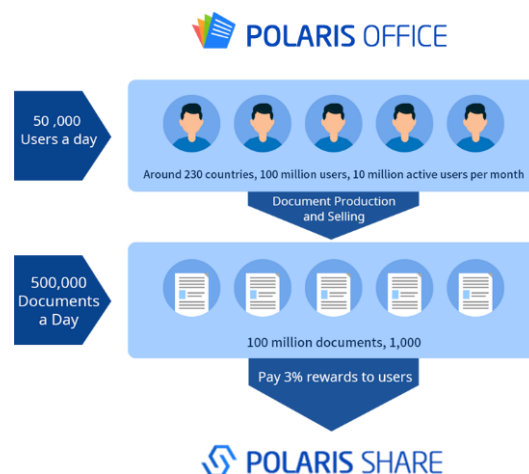
3.3.4　Rewards to freely shared documents and Curating documents

1. Voting by tokens for the distribution of better documents   2. Evaluation according to effective documents

Total 30 POLS   Total 20 POLS   Total 20 POLS

Reward Pool

Curator A   Curator B   Curator C

3. Rewards for producers and curators- 70% for producers and 30% for curators according to the total amount of voting

1. Rewards for knowledge producers of free documents

2. Curating of free documents

3. Curating through reliable curators and voting indirectly

i. The compensation for the knowledge creator of the free document

The knowledge creators of free documents will get 70% of the reward pool as the compensation. The knowledge creator of each document will get the knowledge creator's share of the compensation that corresponds to the total valid number of views of the document the knowledge creator disclosed. Such process will provide the motivation that more compensation can be provided if higher quality documents are provided to more number of people

$$\text{Reward of the document} = \frac{\text{Effective view of the document}}{\text{Effective view count of total document}} * \text{Reward Pool} * 70\%$$

ii. Curation of a free document

If many knowledge creators upload multiple number of documents, there may be multiple number of documents on the same subject in the POLARIS SHARE project. Large amount of documents that are not validated may even cause a confusion to a user, and if the user can't be satisfied, the usefulness of the POLARIS SHARE project may suffer greatly. In order to solve this problem, a curator system will be in place, and we will let curators to select good documents and vote on it. Also, to promote the curator system, 30% of the reward pool will go to the curators as their profit.

This system, where more compensation goes to the curators who voted for the document that more users have viewed, offers the incentive to the curators so that they can maintain their activities steadily.

Each curator can vote on the document the curator wants as much as the number of tokens that the curator possesses. The tokens that the curator voted get tied to the related document for 4 weeks, and they can't be taken out or sold during this period. If a valid view occurs on the document during this period, the curator gets assigned with the reward pool according to the formula below.

Curators who voted for the documents that have the valid votes shares the compensation from a reward pool according to the share ratio. As an extreme case, let's assume that a new social issue arose and one document

got the half of total valid views of all the document. If only one curator voted for this document, this curator gets 15% of the reward pool by himself or herself.

On the contrary to this, a document that is voted by many curators is verified that it is a good document, but it would generate only a small amount of profit for the curator. Therefore, the possibility to look for some other good documents and vote for them gets higher.

Curators will continue their activities of finding various documents and assessing them for the financial compensation.

$$\text{Reward of the document of the curator} = \frac{\text{Vote of the Curator of the document}}{\text{(Total vote of the document)}} * \frac{(\text{Effective view of the document})^2}{\sum (\text{Effective view count of total document})^2} * \text{Reward Pool} * 30\%$$

iii Trusted Curator and Curating with Indirect Vote

A user who doesn't have sufficient capability to identify a good document but wants to participate in the reward pool system can participate by voting for other curators rather than documents. The tokens that are voted on the curators are reallocated in proportion to the votes that the curator voted on each document. For example, if the user voted 6 tokens on the curator who voted 30 tokens on document A, 20 tokens on document B, and 10 tokens on document C, the 6 tokens are automatically allocated in 3, 2, and 1 ratio accordingly. However, 20% of the compensation that is provided in this way is paid to the curator. In other words, the curator who has been validated to have the capability to identify a good document becomes a trusted curator by getting votes from many users, and the curator can also get a part of tokens from the tokens that was voted for the curator along with the token the curator already owns.

3.3.5   Selling charged documents

3. Rewards for Producers, Curators, Foundation- 80% for Producers, 10% for Curators according to the total amount of voting, and 10% for the operating expenses of the foundation.

1.Reqesttoreviewfor Curatores

Document Seller | Purchaser
20 POLS | 30 POLS | 50 POLS
Curator A | Curator B | Curator C
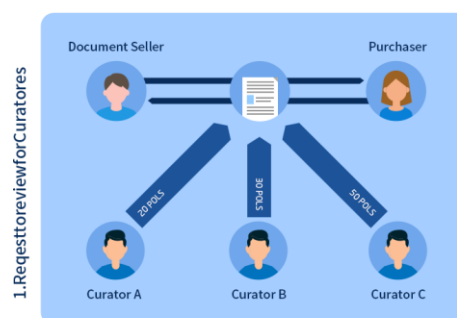
2. Voting for paid documents for the distribution of better documents

1. Selling paid documents
2. Requests to supervise and curate paid documents
3. Pricing for paid documents
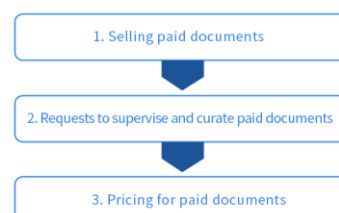
i. Sales of the charged document

A knowledge creator can sell the document for money, and the knowledge creator receives 80% of the total sales amount. 10% goes to the foundation as a transaction fee, and the foundation deducts the operation cost from this amount and includes the deducted amount in the reward pool. The rest 10% is distributed to curators who voted for the document.

$$Reward\ of\ Knowledge\ creator\ of\ paid\ document = Actual\ Sales * 80\%$$

$$Reward\ of\ Curator\ of\ paid\ document = Actual\ Sales * \frac{Curator's\ vote\ of\ the\ document}{Total\ Vote\ of\ the\ document} * 10\%$$

ii. The request for curation and review of the charged document

In general, the curation and the action of voting on the document should take place by reading the document and assessing the quality of the document. But in the case of a charged document, a curator, which is not an actual consumer, may not want to pay the price for it, and therefore, the curating may not take place. To promote the curation, a knowledge creator can make 'the request for the review by a certain curator', and a curator can also make 'the request to review a certain document'. It is the knowledge creator who needs to decide whether it is to view the entire document or a part of the document. The knowledge creator can make 'the request for the review by a certain curator' after deciding whether it is to view the entire document or a part of the document. If the knowledge creator receives 'the request to review a certain document' from a curator, the knowledge creator needs to decide whether to accept the request and what would be the viewing range.

iii. The price of the charged document

The actual price of the token is decided in a separate exchange which is apart from the operation of this project. If we look at the situation until now, there have been many cases that the price of the cryptocurrency changed rapidly. When selling a charged document, the price of the document that was sold at 100,000 won yesterday may become 200,000 won today, and it may become 50,000 won tomorrow, if it is priced based on the number of tokens. In order to price the knowledge fairly, the POLARIS SHARE project offers following three methods for an knowledge creator to price the knowledge.

1. The price is decided based on the tokens (e.g. 100 POLS), and the knowledge creator and the buyer takes the risk of the price fluctuation.

2. The price is decided based on USD according to the exchange rate that the foundation notified by referring to the price of major exchanges. Since the foundation can't notify the exchange rate in real-time, the knowledge creator and the buyer takes the risk of the price fluctuation.

3. The document is sold in USD. The project sells the document in USD and offers the function to pay through a credit card. The payment is converted to tokens based on the exchange rate that is notified by the foundation, and it is paid to the knowledge creator. The buyer can buy the document at a steady price. From the viewpoint of the knowledge creator, the knowledge creator can get the profit by selling the document at the predetermined price at least at the time of the sales. The foundation preferentially pays with reserved tokens and maintains the number of the reserved tokens by buying back tokens as necessary. By considering the exchange rate risk, 20% is deducted as a fee.

3.3.6 Preventing fraud and abusing

i. Abusing of curators due to the financial reason

We can think of a case that the curator system is abused in order to get more profit. For example, a curator (whale) with a lot of tokens votes a lot of tokens additionally on the document that has already received a certain number of votes. But it is not financially valid since the compensation is assigned according to the number of valid views rather than the vote itself and the curators don't get the profit according to the ratio of the votes. For example, if a curator votes 1,000 tokens on the document that already got the 100 tokens voted, the curator would get the $1000/1100 = $ about 90.9% of the total compensation, while the curator would get $10000/10100 = $ about 99% if the curator vote 10,000 tokens. The additional profit by voting 10 times of tokens are only 8%, and it means the curator can get better compensation by fining a good document rather than by voting a lot of tokens on one document

ii. Abusing of curators for non-financial reason and the validators

There may be a case that the curator system is abused for non-financial reasons. A curator may employ a tactic to expose the document the curator owns or created to many people by voting a lot of tokens on it even though it has the low quality.

To prevent such attempt, POLARIS SHARE plans to utilize the validator system. A validator is selected by the foundation through the predefined validation process. The number of validators is determined by the foundation by considering the number of documents and curators in the system, and the validator can work as the member of the foundation.

The validator can make a claim on the votes of a certain curator, and if so, the votes are excluded from the algorithm that determines the exposure on the main and category paged and the order of search result. They, however, are included in the curator compensation determination process. It means it only limits the exposure due to the votes rather than denying the voting itself.

If a claim is made, the foundation must make the decision on the issue in 5 business days, specifying 'no problem', 'unable to judge' or 'has a problem'. In the case of 'no problem', or 'unable to judge', the votes would recover the normal effect. If it is determined to 'have a problem', the votes are canceled, and the tokens are returned to the curator. The compensation that was made in between is canceled, and it is distributed to other curators who voted on the document. If there is no other curator, it may go to the foundation, or it may be paid to the validator as the reward

iii. The promotion of a free document

Since the votes are the index that judges the quality of the document, it is strictly prohibited to damage the intent of the project by abusing the voting system. Nevertheless, a knowledge creator or a user can promote a certain document using a certain amount of tokens to publicize the document. In order to solve this problem, the foundation needs to make the 'Promoted Document' category in the main and category pages, and the 'Promoted Result' category in the search result, and then manage them.

A separate promotion system will act as a driving force to prevent the abuse through voting.

iv. Qualified Knowledge creator

When knowledge creators and the documents that are created by them are gradually accumulated and the

users who recognized the usefulness are gathered, the knowledge ecosystem that the POLARIS SHARE desires can be created. But regardless of the direction that the project desires, some of knowledge creators may attempt to get a profit by disclosing huge amount of documents regardless of the quality of the documents. In such case, there would be excessive number of documents that is beyond the amount that the curators can validate, and therefore, the document that ought to get the fair compensation may not get the compensation and the users may not find the documents they need.

To prevent this, a general knowledge creator can disclose one document per week. In order to disclose more documents, the knowledge creator needs to become a 'Qualified Knowledge creator'. This qualification that can be acquired by vesting a certain amount of tokens is ceased after 4 weeks of the vesting period, and the tokens are returned. Since the tokens that are given as the compensation for disclosing and selling documents are also vested for the same period, an outstanding knowledge creator who has received a lot of compensation would naturally become possible to disclose more documents.

$$\text{Number of possible uploads of Knowledge creators per week}$$
$$= 1 + \left\lfloor \frac{\text{Vested tokens of the Knowledge creator}}{5000} \right\rfloor$$

v. The Role of a Foundation

The foundation performs the notification of the exchange rate, the approval of the validator, and the assessment of the claims made by the validator. The foundation can propose the project stakeholders to review and change various numbers in this white paper (the compensation ratio between knowledge creators and curators, the period that the tokens are vested, etc.).

04 **Technology of POLARIS SHARE**

4.1 POLARIS SHARE and Blockchain

POLARIS SHARE project is implemented as DApp on the block chain platform, and through this, tokens that can form its economy are issued. Since the important data and transaction records are stored on the block chain, it is implemented in a way that it is decentralized, tamper-proof, and trustworthy for the trading. But due to the problems of the performance and cost of the block chain platform, the service will be provided as a hybrid of the block chain and the current cloud technology in the initial stage.

> **Note Performance and Cost of Ethereum**
>
> Ethereum is the first block chain platform where the DApps can be developed and distributed on the block chain using a smart contract. Since the start of its service in 2015, it is the most widely used among numerous ICO projects up to now.
>
> Even though Ethereum offers flexible and reliable DApps development and operation environment, there has been a few cases that the entire network was paralyzed when the processing requests of the entire public network got increased beyond a certain level due to the low transaction processing speed at 25TPS per second or below. It becomes a major obstacle to DApps which must provide a pleasant user experience. Also, since it requests the gas fee per the process of every transaction, the cost can be a big burden from the viewpoint of the user. For example, it costs approximately $0.08 to 0.11 to process one voting of typical social media.

Even if the project is provided as a hybrid type, it will be designed in a way that the decentralization, independence, and reliability would be guaranteed, and as the block chain technology gets gradually improved in the future, many parts of the project will be implemented on the block chain. The selection of the items to be stored in the block chain would be decided according to the data volume, necessary processing speed and the reliability requirement level.

<The process of using blockchain to save documents and validate original documents>>
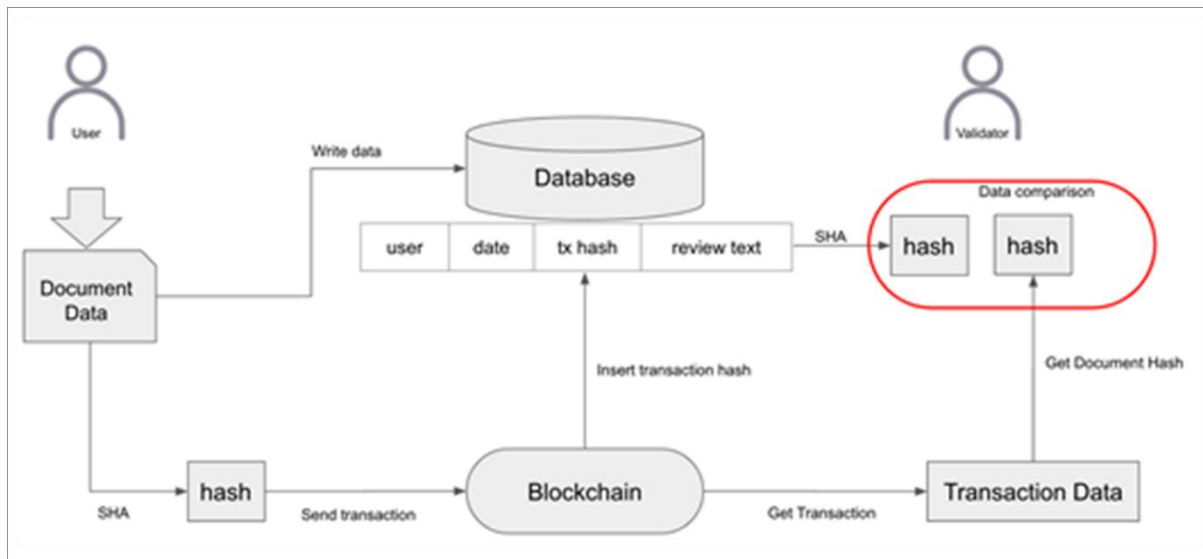
For example, the document-related data can be divided into the document itself, metadata of the document, and the document activity data such as the comments and the number of hits. Even though the document itself is difficult to be recorded in the current block chain due to its big size, the validation on whether the document is an original copy is essential in later time considering the document copyright issues. Therefore, while storing the data itself off-chain, the hash value is stored on-chain so that the system is implemented in a way that the creation time of the document and the identification of the original copy can be trusted.

Also, even if it is implemented through the cloud, not only Polaris Office but also cooperation tools including various Office software would be linked and used through the provision of an open API, which can implement the front end and view the data at the same level, by the POLARIS SHARE team.

In the future, when Ethereum 2.0 launches, we are considering migrating the existing Ethereum-based POLARIS SHARE Dapp to Ethereum 2.0.
Ethereum 2.0 migration will secure scalability of eWASM and secure DApp's service performance through Shard Network. At the same time, it is believed that OP Code efficiency through eWASM and shading will reduce GAS costs spent on services.

4.2 System Architecture
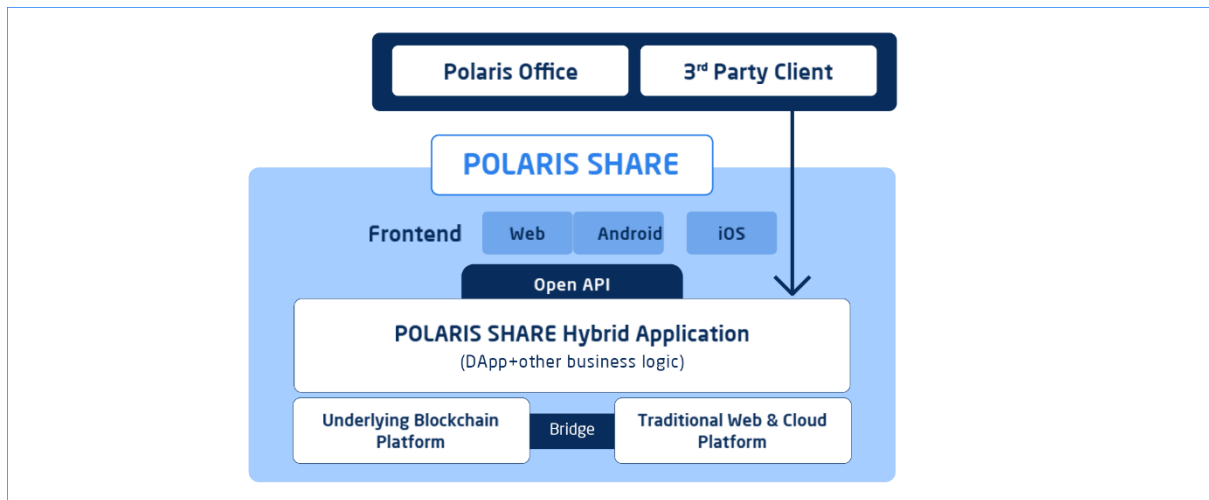
< Fig. POLARIS SHARE Architecture >

POLARIS SHARE contains the following components.

• POLARIS SHARE Frontends: User application to use knowledge trading service

• POLARIS SHAHybrid App: The knowledge trading service business logic based on the block chain and cloud

• POLARIS SHARE Open API: It provides the common functions based on the business logic

• Undelying Block Chain Platform: Ethereum will be used for underlying blockchain platform

• Traditional Web & Cloud Service: Amazon Web Service and privately hosted server will be used.

4.3 Architecture Expansion
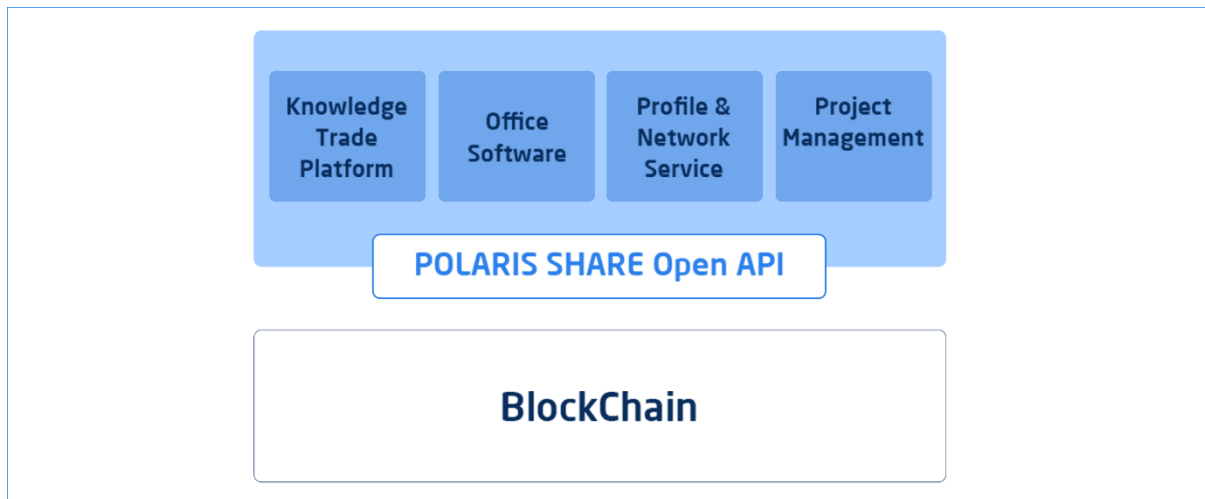
Even though the POLARIS SHARE project only includes a knowledge trading service as an offered service, we aim to become a platform that provides an expert network oriented decentralized working environment beyond the knowledge trading. Starting from the knowledge exchange and the office software, which is a partner app, we will expand to the cooperation services such as a profile and human network service, a project management service, a business messenger, and video chatting. POLARIS SHARE Open API will take the role of making it possible to expand the project to a service platform by supplying the API so that such services can be run on the common base that is stored in the block chain.

4.4 POLS in POLARIS SHARE

POLS is a commodity for using various knowledge trading services. A standard token of ERC20 specifications can be traded in the cryptocurrency exchange by adding certain functions, and in the POLARIS SHARE platform, it can be used for the purpose of gathering, compensating, and exchanging users and document contents or for some other purposes.

05 Road map

2014.04 Laun of Polaris Office Cloud Service

Released Polaris Office Cloud Service where all types of documents including Word, PowerPoint, Excel, and PDF could be read in all types of platforms such as a smartphone a tablet, a PC, and Mac

2018.05 Preparation of POLARIS SHARE 1.0

Create the white paper and the service plan.
Secure technical experts on the block chain
Establish an ICO corporaton and prepare other necessary items.

2018.06 Laun of Polaris Office Cloud Service

It grew to be a service with a total of 85 million subscriber as 50,000 new subscribers have joined every day.
Added the cooperation-related functions such as collaborative editing and sharing.

2Q of'19 Tectnet of POLARIS SHARE 1.0 Service

At least complete the MVP function.
Implement and tune the service on the test network

3Q of'19 Mainnet of POLARIS SHARE 1.0 Service - Phase 1

Share free documents,
Perform voting and curation on the documents.
Compensate knowlede creators and curators of the free documents through a reward pool.
Strat marketing actives including an airdrop for Polaris Ofice Users.

4Q of'19 Mainnet of POLARIS SHARE 1.0 Service - Phase 2

Sell the charged documents.
Provide a payment funtion for the documents with fiat money and tokens.
Start fraud detection though a validator.
Add Advertisement function.

1Q of'20 Mainnet of POLARIS SHARE 1.0 Service - Phase 3

After purchasing tokens with the prom contextual ads, etc., ad the tokens to the reward pool.
Provide knowledge creator profiles and personal connections.

06   Token Distribution & Use of Token

6.1 Token Distribution

▶ Token Symbol: POLS   ▶ Token Type: ERC 20

Total Token 5,000,000,000 (50 Billion 100%)

- Token for Sale 1,500,000,000 (15Billion, 30%)
The amount of tokens that will be sold through ICO will be 30% of the total issuance, and the fund that is raised through the sales of tokens will be used for the development cost and the marketing cost.

- Ecosystem 1,250,000,000 (12.5 Billion, 25%)
It will be used for the operation of the reward pool (21%), the airdrop for users (4%) to attract users and documents in the earliest time possible.

- Team, Strategic Partner, Advisory 1,025,000,000 (10.25 Billion, 20.5%)
It will be used for the compensation for the team members who participated in the project, strategic partners for the success of the project, and the advisors.

- Reserve 1,225,000,000 (12.25Billion, 24.5%)
At first, it will be possessed by the company (foundation), and it will not be liquidated unless there is a special purpose of the use such as the expansion of the service and some other contingencies that are beyond the concept of POLARIS SHARE

6.2 Use of Token

- Operation 10 %
- Business Development & Marketing 25%
- Ecosystem Development 50%
- Legal & Consulting 5%
- Contingency 10%

07   Core Team Member

CEO Eddie M. Kwak

- Current CEO of POLARIS SHARE
- Current Chairman of Selvas Group
- Founder of INFRAWARE(KOSDAQ Listed)
- Master of Computer Engineering / Hankuk University of Foreign Studies

He founded INFRAWARE in 1997 and created the Polaris Office for 100 million people around the world. Currently, it also holds the chairmanship of the two-listed Selvas Group.
Starting with infrastructureware, Selvas Group declared its launch as a group company in 2017.
The Selvas Group currently has office software, artificial intelligence, digital healthcare, Uwellness, mobile games and more. It is continuing its growth through innovation in the domestic IT industry

COO Saint Y. Sung

- Current COO of POLARIS SHARE
- Former Vice President of YAP Company
- Former COO MCOM
- He is a service planning expert who has been planning and launching numerous services in the IT industry for more than 20 years.
  Since 2010, he has launched Smart Wallet (currently Syrup, CLIP, etc.) services centering on the O2Oplatform business, and based on this, he has launched various services through Smart Wallet consulting to mobile communication companies and financial companies.
  He joined the POLARIS SHARE project as COO after serving as vice president of location-based consumption platform YAP.

Advisor Miles H. Lee

- Current CEO of INFRAWARE(KOSDAQ LISTED)
- Former CFO of Selvas Healthcare(KOSDAQ LISTED)
- Strategy Planning Manager of INFRAWARE
- Lead Engineer of Mobile Browser Development
- Manager of Browser Sales Team
- Computer Science, Yeonsei University

CGO Richard S. Yoon

- Current Vice President of Selvas Group
- Former Softbank Finance group
- Former Merrill Lynch International
- Vocal Department, Seoul National University

CTO Jay J. lee

- Current CTO of POLARIS SHARE
- Big Data, Cloud, Middleware Engineering & internet service application architecting
- Master of Information and Communication / Soongsil University

08 Strategic Partner

8.1 INFRAWARE Inc

▶ INFRAWARE is a KOSDAQ-listed company that was established in 1997, and it is a representative dominant software company in Korea. It has demonstrated the capability to generate the growth momentum with the unique spirit of challenge whenever the IT paradigm changed for last 20 years. Especially, its experience of planning •, developing • , launching • , and operating the Polaris Office, which will work as the priming water in the POLARIS SHARE, and the network it has will be the core stepping stones for the success of the project.

As of 2Q of 2018, a total of 200 executives and employees are working, and 80% of them are software engineers. It has various technical competencies and service operation competencies, as its main business includes Office • mobile games and • the block chain.

8.2 Coinplug Inc

▶ Founded in 2013 by Ryan Uhr and the finest engineers from both Silicon Valley and Korea, Coinplug is the world's 2nd, and Korea's 1st Blockchain Patent Holder — with a cumulative of 115 blockchain related patents in Korea and 46 international patents. Vitalik Buterin (Co-Founder of Ethereum) is also a technical advisor at Coinplug. Established with a vision to build an expansive blockchain ecosystem, Coinplug has spearheaded an array of innovative blockchain solutions and has worked with many leading enterprises in Korea. Coinplug's investors include SBI Asset Management and Tim Draper.

8.3 ConsenSys Ventures Inc

▶ POLARIS SHARE was chosen as one of the first cohorts of Takion, an acceleration program by ConsenSys Ventures

Appendix DISCLAIMER

End of Document

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