Twigs ᵉ

Business without Borders

Content

1. Abstract

This document contains solutions to problematic of the practical transition from post-industrial formation to the society of the future – Digital civilization. The technologies and social prerequisites that are the basis of this transition are also described.

Digital Economy and Digital Governance concepts definitions are given, their key criteria and features are highlighted and described. The necessity of creating complex social solutions on the basis of the "Digital Twin" concept in the framework of digital platform business model is argumented.

As one of the solutions, Twigse platform – ready for release Blockchain based Management System of Social Structures of various complexity implemented with implemented with DeFi banking based on digital assets operations - is presented.

The description of the technologies used for the DeFi platform development, monetization and tokenomics of the platform's internal coin TWIG are given.

The developed technical solution is added as Appendix 1.

Twigse moderation system is attached as Appendix 2.

The Roadmap of the project further development for 2 years is also included.

Keywords

DeFi / Blockchain technologies / Digital Economy / Digital Governance / Big Data Analysis Machine Learning / Business & Finance / Management system / Business management Digital Twin Medias

2. Introduction

Twigse platform is a Social Structures Management System with DeFi banking, that allows to embody the transition to a new paradigm of social development - Digital Civilization.

Twigse platform implements in practice the concepts of the Digital Economy and Digital Governance in the form of DeFi platform with an intuitive interface, implemented smart-contracts, Big Data & Machine Learning analytical predictive system and built-in banking on the base of digital assets operation.

The name "Twigse" was not chosen by chance - it implies growth and development.

The platform's functionality provides universal solutions for management, growth, partnerships arrangement for both **administrative units and for all legal forms of ownership**, various types of **business** (B2B, B2C, medium, small, large), as well as for **medias**, significantly reducing costs and speeding up the scaling process.

In partnership with world-leading blockchain network BNB Smart Chain, decentralized exchange PancakeSwap and global leader in digital asset operation services BitGo, Twigse allows to conduct all types of momentary cryptocurrency transactions - from transfers to exchange operations - for more than 50 coins and tokens.

The Twigse platform is a universal tool due to the possibility of implementing any tree structure. Large and small administrative units and their associations, municipal structures, businesses of various levels and orientations, mass medias - this is an incomplete list of potential users of the system.

3. Problematics

3.1. Digital Civilization and Digital Economy

The development of human society is steadily moving towards the construction of Digital Civilization.

We all believe we are moving to a world dominated by computation and data, and our interactions with it.

It's related both with the development of appropriate technologies and with the needs of the human society itself. The end of the capitalism's extensive development model inevitably requires a review of lots of the fundamental tenets of the current world order. This means that under the auspices of digitalization, a completely new world can be created in which other values, of the system of values, managerial paradigms, social norms and economic laws will dominate.

The world needs:

- A digital world that presents a clear interface to each of its users;
- Ensuring the ethical standards are following by all;
- Custodian or gatekeeper for data and requests to use it. Helping each party to manage their own data;
- Clarity on laws, regulation and jurisdiction. Ensuring all are equal under transparently applied law;
- The right balance between privacy and regulation;
- Ensuring that all parties treat each other in a civilized manner.

Digital Civilization is based on Digital Economy and, as an important part of it, Digital Governance.

Digital Economy is not a separate industry; in fact, it is the foundation that allows to create qualitatively new models of business, trade, logistics, production, changes the format of education, healthcare, government, communications between people, and therefore sets a new paradigm for the development of the state, economy and the whole society.

In the technological aspect, the Digital Economy transition processes are currently determined by the following trends: mobile technologies, IoT, Machine Learning and Deep Learning, business analytics, cloud computing and social media.

Today there is no single understanding of the Digital Economy phenomenon, there are exist various definitions.

We rely on the official definition of this phenomenon: the Digital Economy is an economic activity in which the key production factor is digital data, processing of large volumes and using of the analysis results of it. Compared with traditional forms of management, can significantly increase the efficiency of various types of production, technologies, equipment, storage, sale, delivery of goods and services. Formation of the Digital Economy is a serious issue of national security and independence.

A key factor in the digital transformation of the activities of market entities is the development of digital culture. Recently, a significant number of scientific papers have been devoted to the problems of digitalization of the economy, among which we can distinguish N. Chakpitak [6], C.P. Martin-Shields [7], H. Goldstein [8], M. Pilik [9], K.H. Tan [10] and others. In Russia this area is covered by the following researches: V.B. Betelin [1], K.Y. Eremeichuk [2], G.I. Kudryavtsev [3], I.V. Sudarushkina [4], A.A. Kharchenko, E.V. Ustyuzhanina [5] and others.

The basic reason for expanding digital segment of the economy is the growth of the transaction sector, which in developed countries accounts for over 70% of national GDP. This sector includes: public

administration, consulting and information services, finance, wholesale and retail trade, as well as provision of various utilities, personal and social services. The higher the degree of diversification and dynamics of the economy, the greater the amount of unique data circulates inside the country and outside it, and, accordingly, the more information traffic is generated within national economies. Therefore, the digital economy operates most efficiently in markets with a large number of participants and a high level of penetration of ICT services. This primarily relates to Internet-dependent industries (transport, trade, logistics, etc.), in which the share of the segment under discussion is approximately 10% of GDP, over 4% of employment, and these indicators have a clear upward trend.

State programs and strategies for the development and stimulation of digital technologies and / or digitalization of national economies and industrial sectors are currently developed and implemented in dozens of different countries of the world, as well as at the interstate level.

Thus, only in the EU countries, according to the official data of the European Commission for March 2019, there are more than 30 national and regional initiatives on industrial digitalization (on digitizing industry).

In the digital economy, new opportunities for entrepreneurship and self-employment are rapidly expanding. In many cases, investments in the development of information technologies have made it possible to receive dividends in the form of economic growth, creation of new jobs, emergence of new types of services for the population and business, and reduction of public administration costs as part of e-government projects.

The global programm "Digital Economy" outlines the following main aims:

- The growing inclusion of citizens and business entities into cooperation in the digital space;
- The creation of an infrastructure that ensures the interaction of entities in the digital space;
- The formation of sustainable digital ecosystems for business entities;
- Cost reduction of business entities and citizens in interaction with the state and among themselves;
- Improving the competitiveness of the economy, business entities and citizens through digital transformations in all spheres of society.

3.2. Digital Governance

Digital Governance is composed of the three elements, namely e-Government, e-regulation and edemocracy.

Digital or e-government refers primarily on providing information and online transaction of services to citizens by the government. On the other hand, Digital Governance or EGovernance focuses on public's participation and its role as citizens [1].

Digital Governance is broadly defined as an application of information technology to the functioning of the government to enhance the delivery of public services to the citizens and other individual and organizational consumers of the government services [2].

According to West in Digital Governance under an e-government, the delivery of information and services online through the internet or other digital means is assured. Digital Governance or Egovernance can also be defined as the application of electronic means in (1) the interaction between government and citizens and government and businesses, as well as (2) in internal government operations to simplify and improve democratic, government and business aspects of Governance. According to Kettl "Governance" is a way of describing the links between government and its broader environment - political, social, and administrative" [4].

There are three levels of interaction between the customers/citizens and the administration namely: one-way information (e.g., information portals), interaction (e.g., filling out forms and submitting them via internet), and transaction (e.g., advice or consultations via internet).

These can still be labeled as a first step i.e. "substitution", as traditional paper or interactive services are simply being digitalised or substituted by an electronic interface, without however changing the way the services are produced. Indeed, beyond substitution, there are three additional steps lying in between whereby the State operations are going to be transformed by the modern technologies.

These are: (1) mirroring, (2) new digital products, and (3) total outsourcing of production.

Mirroring

However, the next step in the use of the modern technologies in the modernisation of the State's operational activities pertain to substantial changes in the way the services are being produced. At first, these technologies are merely used to improve the production process, while simultaneously improving customer service. This is for example the case when the customer can follow a file through the maze of the administration process by means of some tracking or tracing function.

New services

After the first step, new services are created with the management of the information about the production process and the customers. Most of these services are distributed via the internet or other technology-based interfaces (SMS, etc.). As an example one may take statistical information on administrative performance (e.g., time it takes in average to receive a permit). The government sometimes must use services of private operators for developing such new services.

Efficient management

The third step is to efficiently manage the outsourced or privatized services. Digital Governance is a dynamic concept, which implies the growing use of the modern information and communication technologies for the three State's main functions (e.g. e-Government, e-regulation and e-democracy), increasingly involving non-state actors at levels other than the national one.

Aims, objectives and utility of Digital Governance:

- Satisfying the Citizens;
- Digital Governance as Processes and Interactions;
- Digital Governance as a Major Tool for Government;
- Democratization v. Environmental Benefits
- Express Service Delivery with Convenience
- Public Approval
- Government Transparency
- Simplifying Processes

Models of Digital Governance

There are a few basic theoretical models of Digital Governance, which may serve as a guide to bring this idea into reality.
There are two characteristics of the new technologies that remain the same in these models. First one is that these models of Digital Governance enable equal access to information to anyone who is linked to the digital network, and second one is de-concentration of information across the entire digital network [11].

- Broadcasting/ Wider-Dissemination Model
- Comparative Analysis Model
- Critical Flow Model
- E-Advocacy/Lobbying and Pressure Group Model
- Interactive-Service Model

A. Broadcasting Model.

In Broadcasting model, governance-related information, which is already available in the public domain, is further spread into the wider public domain using modern information and communication technologies. This raises awareness among the citizens about ongoing governance processes and government services that are available to them and how they can benefit from them. It allows citizens to form an opinion of the government and its administration-based services delivered to them - whether the government services were available to them, and the quality of received services.

Few examples of this model may include putting governmental laws and legislations online; making available online the contact details of government officials; making available government's fiscal information such as governmental plans, budgets, putting key judicial decisions online.

B. Comparative Analysis Model.

Comparative Analysis Model is used to empower people by comparing cases of bad governance with those of good governance and identifying specific aspects of bad governance, the reasons, and people behind it, and how the situation can be improved.

The model is based on using immense capacity of information and communication technologies and social media tools to explore given information sets with comparable information available in the public or private domain. Essentially, the model continuously assimilates "best practices" in different areas of governance and uses them as benchmark to evaluate other governance practices.

It then uses the result to advocate positive changes or to influence 'public' opinion on existing governance practices. The comparison could be made over a time scale to get a snapshot of the past and the present situation or could be used to compare the effectiveness of an intervention by comparing two similar situations.

C. Critical Flow Model.

The model is based on broadcasting information of 'critical' value (which by its very nature will not be disclosed by those involved with bad governance practices) to targeted audience using ICTs and other tools. Targeted audience may include media, affected parties, opposition parties, judicial bench, independent investigators or the general public.

This model could be applied in the following possible ways:

- Making available corruption related data about a particular Ministry / Division/ Officials online to its electoral constituency or to the concerned regulatory body.

- Making available Research studies, Enquiry reports, Impact studies commissioned by the Government or Independent commissions to the affected parties.
- Making Human Rights Violations cases freely available to Judiciary, NGOs and concerned citizens.
- Making available information that is usually suppressed, for instance, Environmental Information on radioactivity spills, effluents discharge, information on green ratings of the company to concerned community.

D. E-Advocacy Model.

E-Advocacy/Mobilization and Lobbying Model is one of the most frequently used Digital Governance model and has often come to the aid of the global civil society to impact on global decision-making processes.

The model is based on setting-up a planned, directed flow of information to build strong virtual allies to complement actions in the real world. Virtual communities are formed which share similar values and concerns, and these communities in turn link up with support of real-life groups/activities for concerted action. The model builds the momentum of real-world processes by adding the opinions and concerns expressed by virtual communities.

This model could be applied in the following possible ways:

- Fostering public debates on issue of larger concerns, namely on the themes of upcoming conferences, treaties etc.
- Formation of pressure groups on key issues to force decision-makers to take their concerns into cognisance.
- Making available opinions of a suppressed groups who are not involved in the decision-making process into wider public domain.
- Catalysing wider participation in decision-making processes.
- Building up global expertise on a particular topic in absence of localised information to aid decision-making.

E. Service Delivery Model

Interactive-Service model is a consolidation of the other Digital Governance models and opens up possibilites for one-to-one and self-serviced participation of individuals in governance processes. Under this model, the various services offered by the Government become directly available to its citizens in an interactive manner.

It does so by opening up an interactive Government to Consumer to Government (G2C2G) channel in various aspects of governance, such as election of government officials (e-ballots); decision to make on specific issues (eg: health plans), delivery of individualised government services, gauging public mood and opinions, targeting specific communities for specific governance advice or ervices, bringing mass awareness.

This model could be applied in the following possible ways:

- To establish an interactive communication channel with key policymakers and members of planning commissions.
- To conduct electronic ballots for the election of government officials and other office bearers.
- To conduct public debates / opinion polls on issues of wider concern before formulation of policies and legislative frameworks.
- Filing of grievances, feedbacks, and reports by citizens with the concerned governmental body.
- Establishing decentralised forms of governance.
- Performing governance functions online such as revenue collection, filing of taxes, governmental procurement, payment transfer etc.

E-Governance Performance criteria

E-Governance Category	Keywords
Privacy/Security	Privacy Policies, Authentication, Encryption, Data management, Cookies
Usability	User-friendly design, branding, length of homepage, targeted audience links or channels, search capabilities
Content	Access to current accurate information, public documents, reports, publications, multimedia materials
Services	Transactional services – purchase or register, interaction b/w citizens, business and government
Citizen and Social Engagement	Online civic engagement/policy deliberation, social media applications, citizen-based performance measurement

3.3. Digital business models

In the process of transition to the digital economy and digital management, traditional models are being replaced by so-called «digital business models».

Traditional business model vs Digital business model

Traditional business model

Strategical planning	→	Production	→	Stratege	→	Transport and Logistics	→	Sales in Stores
Definition and analysis of global trends		Products production		Storage of producted products		Planning, delivery and logistics control		Products distributions in Stores

Digital business model

Strategical planning	→	Production	→	Stratege	→	Transport and Logistics	→	Sales in Stores
Definition of trend according to Big Data analysis and Machine Learning		Products optimization according to clients demand		Leftovers optimization in real time mode		Delivery control in real time mode and process prediction		Direct sales without intermediarles

Currently digital business models are mostly put into practice as platform business models. Platform business models create value for customers through the use of digital technologies that allow various economic actors to interact in real time using electronic digital communication channels that ensure equal access for all participants to information and its reliability.

The main criteria for identifying platform business models can be considered:

1. Time criterion: direct (without intermediary agents) interaction of market participants in real time.
2. Financial criterion: low transaction costs of user interaction with platform.
3. Spatial criterion: the absence of barriers to entry into the system.

Well-known examples of platform business models that have replaced traditional ones are the taxi service Uber, the reservation service for apartments Airbnb and the Delimobile car rental service.

All these models are united by the fact that they are created on a common base platform, which makes it possible to reduce the transaction costs of interaction between participants in market relations by accelerating communications and eliminating intermediaries.

Digital methods of starting a business are moving from science fiction to the real economy, while the modern theory of strategic management is becoming more and more in demand, which will allow management to correctly interpret the accumulated business experience.

Comparative analysis of business models

Comparative criteria	Traditional business models	Platform business models
1. Method of market participants' interaction	On the basis of Agents and other intermediaries' chain	On the basis of a platform, providing direct interaction b/w participants
2. Speed of market participants' interactions	Low or middle	High
3. Additional interactions limitations	Yes – territory boundaries, language, currency, etc.	Usually no
4. Cost level of the participants' interactions	Middle or high	Low
5. Cost of starting the business	Low costs of new intermediary involvement	High costs of the platform development

Platform technologies allow to combine the advantages of using effects of a large scale with an individual approach to each client, thereby providing an advantage in the speed of customer service and costs by eliminating intermediaries.

Therefore, the scope of platform business models is industries with a high share of information in relation to other factors of production. In such industries, competition between companies is rapidly replacing competition between business platforms, leaving only narrow market niches for companies with a traditional business model.

However, the prospects for using business platforms in industries with a relatively low share of "information", such as, for example, the steel industry and mechanical engineering, where there is still no sharp reduction in the cost of production as a result of the "transition to digital", remain uncertain.

The introduction of business platforms in any industry requires a fundamental change in the management system of the company, so it is a high-cost investment process. The need to ensure a return on financial investment increases the strategic management of the company, which should take into account the rapidly advancing global digitalization as one of its own capabilities, which is also likely to be used by competing companies.

However, the digital methods themselves, which are actively used by companies, are far from being optimal. Multiple and interchangeable tools on the market bring more chaos to the processes of obtaining and analyzing information. Moreover, relevance and origin of the information itself can also raise big questions. A possible solution is to create a universal platform, the operation result of which will be the creation of a digital twin of society with all the basic hierarchical entities - be it government, business, medias, communications, financial transactions, etc., which would be based on the following principles:

- Incorruptible agreed records of data, rules, transactions.
- Impartial if implemented correctly.
- Rules transparently applied.
- Decentralized and works independent from individual parties.

4. Twigse Platform

Twigse is a ready for release digital platform created on the basis of the frontier technologies – Blockchain & DeFi, Big Data Analysis, Machine Learning - that allows to solve majority of the problems mentioned above.

Generally, Twigse platform is a universal tool due to the possibility of implementing any tree structure. Any social structure has the form of one whole, divided into sets and subsets of separate elements by territorial, social, age and other characteristics.

Twigse platform opens up new possibilities for organizing, uniting and managing companies, enterprises, entities, associations etc.

Concerning opportunities for business, Twigse promises to become the digital platform of the future, due to its networking and partnership tools for businesses and consumers in the B2B, B2C areas. By uniting these key user groups, Twigse is creating commercial partnerships by linking their activities and innovations, both financially and socially.

On the innovative Twigse platform, members are able to stand on the shoulders of giants by competing in the same company Community with global business conglomerates, publicize and

secure investment opportunities with mutual lending, crowdfunding initiatives and insurance, as well as send initiatives and send instant payments on the blockchain to partners and third-party companies. This is seamlessly completed with multiple internet banking options through Twigse's integrated cryptocurrency banking facility.

Use cases examples

4.1. Small scale businesses

Target audience

Brands | Buyers   Entrepreneurs   Businessmen   Companies | Partnerships

Issue: With every passing year a share of talented and business-minded dwellers of modern huge cities that would like to trade daily prolonged voyages to office buildings for a comfort of a home-based enterprise becomes more and more substantial. Only a lack of initial funding, experience, time and a habit to overcome bureaucratic and intercontinental barriers stand between thousands of entrepreneurs from all over the globe and their full-scaled businesses with optimal income and turnover rates.

Solution: Twigse demolishes borders and erases all administrative obstacles for business activities all over the planet. Within our platform businessmen are free to form alliances and Communities, to promote cooperation in various fields, to unite resource pools and to reach new goals together.

Twigse leaves to the past all time-devouring bank visits with multiple credit request applications to fill by granting any of its member entities a set of options and corresponding tools to either effectively provide credit financing for partners' companies or to ask for it, all depending on the circumstances faced.

Twigse assists with an exponential actual costs' decrease and total annihilation of transactional and managerial expenses, lowering product costs. Easy partnerships with companies from other countries and regions open up new unexplored markets absolutely unknown and unavailable just days earlier

Financial opportunities

Twigse financial system provides the widest range of opportunities for **entrepreneurs**:

- Company can create its own community and sell products to interested partners right from the start with no need to waste time and money on promotion and visits to all "need to be there" places;
- Company can join a number of business communities, getting a huge inflow of new partners with no time or money spent;
- Merging a big amount of companies inside pool, the participants get an opportunity to distribute profit inside pool, determining prices policy, systematize all payments in a single database;
- Inviting new participants, communities can get fees from the participant's sales, fixing the precent in one click;
- Entrepreneurs can arrange a mutual credit system for partner companies in Communities by providing goods or company profile in Twigse as deposit;
- Brands and fashion designers have the opportunity to arrange crowdfunding actions for buyers to release a new product or clothing collection;
- Companies get the opportunity to sell their goods and make profits in different Communities at the same time;
- Opportunity for brands to receive credit funds from Communities to create new collections, with deposit secured by future collections and sales.
- Simplified payroll system for employees working in companies in different countries and continents in a single monetary unit;
- Company can run its stores and branches via Twigse, managing employees and distributing finances: instant discussions and access to any member of the staff, salaries, profits, shared documents and collections database, shared flow of information from all branches, payments to and from shops as well as between shops, all employees with structural and branch hierarchy within single community;
- Connection of the company's employees to the "green mining" of the TWIG platform token through the partner app JUST;
- It is possible to draw up contractual relations between companies' suppliers and companies' buyers through a smart contract in a single currency;

- Registration of contractual relations between companies from different countries and registration of transactions and contracts online through a smart contract in a unified digital currency;

- Protection of the interests of both parties of the contract by reservation of funds in a letter of credit and write-off when confirming that all conditions are met by both parties.

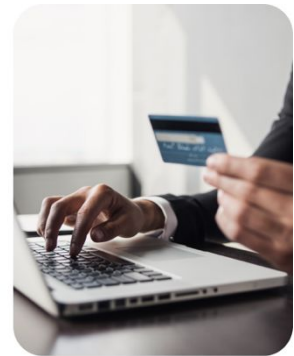## 4.2. Microfinance

Target audience

| Private investors | Family funds | Microcredit financing companies | Private banking |

Issue: The present day's market makes providing credit financing to fellow entrepreneurs quite attractive for both stand-alone businessmen and companies, especially compared to a prospect of zero or minus interest ratings' bank deposits that are currently the only feasible way to save any not engaged actives from possibilities of another exchange meltdown. No matter how good an idea is, it is nowadays successfully thwarted by bureaucratic barriers, spinning around credit financing activities licensing, a need to identify your potential debtor and access his/her/its credit history, not to mention an unavoidable hustle in case of debtor's financial insolvency.

Solution: Twigse grants unique decentralized credit financing opportunities to all its users. Anyone who invests in the platform's TWIG token can earn money by offering credits to other users with interest rates and maturity dates all being a subject for mutual discussion. Credit redemption is safeguarded by a platform's smart contract, involving stable currency or debtor's business as a mean of deposit thus making any identification obsolete. DeFi technologies assist in saving funds otherwise wasted on licensing, opening a passageway to every-day inter-business credit financing for any company with no scrutiny of its field of interest, making all platform's users mutually effective banking institutions.

Financial opportunities

Twigse extends bounds for private crediting by introducing pioneer decentralized finances' options:

- An investor can create a bank of his/her/its own and join banking Communities, looking there for new clients for credit arrangements;

- A company can create its own banking Community thus uniting its branches or choosing to involve outer companies in order to increase sheer numbers of both turnover assets and clients;

- An investor may offer credit financing to community subscribers;

- A banking Community has a profit-sharing feature for investing partners;

- A company can perform a special credit terms policy adapting for every given client;

- All loans are safeguarded by a security deposit with terms mutually agreed upon by a creditor and a debtor;

- All legal binding is performed by smart contracts in unified digital currency, bypassing identification and credit history background checks;

- All transactions with a number of Communities and companies involved may be carried out without disclosing any or all participants' data if so, they choose it to be.

- An investor can simultaneously offer credits and choose to opt for ones dealing with various companies and/or banking Communities;

- An automated interests' withdrawal and deposit system with an option to set a date/dates;

- All transactions from an initial transfer to debtor's credit account up to full repayment of a credit in question are carried out in platform's TWIG token and are performed instantly, being a subject to remuneration in case of proven fraud or any kind of error.

4.3. Network companies

Target audience

Distribution and branch chains

MLM Companies

Dealer Networks

Cross Border Trading Companies

Issue: Effective management here is based on central supervision for everything (branches and offices) and everyone (sections and individual employees) within a combined informational space. Instant money flow to both of the above (transfers, reward payments) is a must. Most modern companies fail to meet these criteria due to myriads of local and international barriers.

Solution: Twigse allows creation of business structures of any complexity: lots of offices, branches, distribution centers, warehouses all supervised from a single center. Due to platform's innate international nature all existing barriers for companies from all over the world are null and void. Corporate data flows are directed to global news feed or to group chats and section channels. All transactions are instant and mutually beneficial: inner transfers, payrolls, lending, partnership deals.

Financial opportunities

With Twigse business gets the following opportunities:

- Quick payments between branches, consolidated multiple accounts and management for merging of accounts of partner companies;
- Profits distribution among several companies involved into the partnership;
- Instantly conducted operations between companies located anywhere in the world and creation of financial alliances with companies from different countries;
- Receipt and systematization of the analytics of financial transactions of multiple accounts both own and those of partners, members of the alliance;
- Inbound and outgoing payments as split second transactions from any company independently from banks or local currencies of different countries of the globe;
- Receipt of commissions from partnership transactions in various areas of companies' financial activity;
- Provision of loans to partner companies and company's own branches within the Community by using the platform's DeFi banking features;
- A simplified salary payment system for employees working in branches in different countries and continents in a single digital currency;
- Registration of contractual relations between companies from different countries and registration of transactions and contracts online through a smart contract in a single digital currency;
- Protection of interests of both parties to the contract by reservation of funds in a letter of credit and debiting when confirming the fulfillment of all conditions by both parties.

4.4. Blogs and mass medias
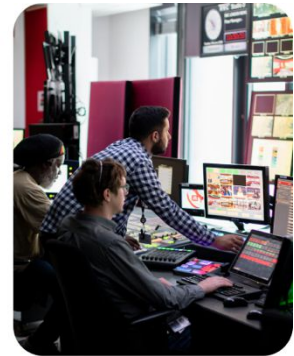
Target audience

Bloggers   Influencer   News sites   MEDIA

Issue: Bloggers struggle for subscribers singlehanded. Alas, but less than 1 percent of nearly 500 000 000 of them shall see their efforts profitable. Others waste away for altruistic reasoning or life experience at best. Large publishers have the audience but need to separate it into segments each run by an overloaded state of writers. Well, they are expected to cover all aspects of modern life. As a result there is a drop in advertisement efficiency. A lot of high-potential young authors fail to make a debut.

Lack of fresh ideas leads to an imminent loss of profits due to viewer base decrease.

Solution: Bloggers as well as any sections of huge publishers can join others of their kind, enjoy a combined audience and increase it together. Mutual information stream resolves any problems with regular new content and attracts even more followers. The best of newcomers according to users' opinion and platform's ratings may be welcomed as fully recognized individuals for bloggers or as team members for Mass media. User-friendly search and filter systems show readers an up-to-date content based on creators' variety and their preferences.

Financial opportunities

Medias and blogs get the following opportunities:

- Fast monetization of the content;
- Sharing costs and adding profit between multiple blogs
- Distribution of profits or deductions of agreed interest between bloggers in the Community;
- Registration of paid subscriptions and Donates to the Journal and Blog;

- Opportunity to draw up contractual relations between the publisher and the authors through a smart contract;

- Maximum copyright protection through a smart contract, without any fees for legal support;

- A simplified settlement system between authors and publishers from around the world using a single settlement unit;

- Opportunity to receive royalties to each blog at once from several publishers;

- Simplified system of settlements between blogs within the same Community;

- Connecting subscribers to the "green mining" of TWIG platform tokens through the JUST partner app with the ability to earn up to 20% of the mined amount;

- Protection of the interests of authors and advertisers by means of reservation of funds in a letter of credit and debiting when confirming the fulfillment of all conditions of both parties;

- Simplified system of settlements between advertisers and blogs through a smart contract and settlements i in a single monetary unit.

4.5. Sports leagues, teams, clubs

Target audience

Teams
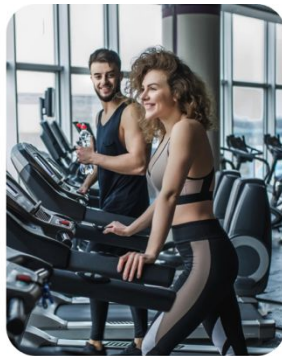
Fitness Clubs

Leagues

Sports Federations

Issue: Sports leagues include lots of teams, teams also have lots of non-coordinated fan clubs. In fact, all the promotion and information activities of the teams take place in social networks. Any information about a match or purchasing a new athlete is discussed in thousands of social communities, connected somehow to this kind of sport. Each team and the league it involved in has different and unconnected groups. Thus, currently a league cannot manage the information published in these groups, can't govern or even sort the teams by geo, fans and other criteria, can't unite all the fans of the sport (e.g. football, hockey, baseball…).

Solution: In Twigse the whole sport leagues can be united into one coordinated system. Creating global communities for different sports, uniting all the appropriate teams and fan clubs. Managing the sport clubs with trainer stuff, athletes, and fans, arranging all the financial and informational processes inside the system. Create a single information environment. In online mode choose the best players, the most active fans, assign leading roles, using Twigse election functional.

Twigse invites athletes and sports fans from around the world to participate in "green mining" of the TWIG platform's token through its partner mobile app, JUST. Athletes will be able to monetize every minute of their workout and exchange the coins they earn for real money. Teams, fitness clubs and leagues will be able to earn up to 20% of the coins earned by organizing athletes in their Communities.

Financial opportunities

Sports leagues, teams, clubs get the following financial opportunities:

- A simplified settlement system between sports clubs and athletes from around the world using a single settlement unit;
- Opportunity to accept membership fees for sports and fan associations;
- Opportunity to arrange crowdfunding promotions by a sports club to attract financing from fans;
- Opportunity to sell sports symbols and promotional products of the club to fans in the news feed and chats of sports clubs;
- Ability to monetize sports training for athletes, teams and clubs;

- Protecting the interests of athletes and teams by reserving funds in a letter of credit and debiting when confirming that all conditions are met by both parties;
- A simplified settlement system between athletes and teams through a smart contract and settlements in a single monetary unit;
- A simplified system of settlements between advertisers and sports clubs through a smart contract and settlements in a single monetary unit.

4.6. Users

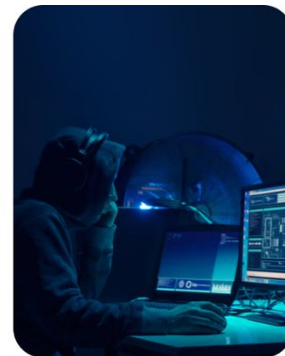### Target audience
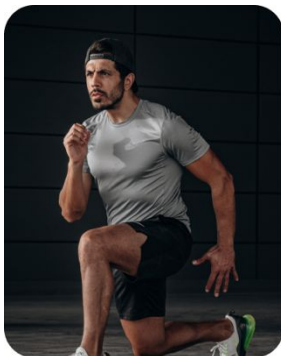
Athletes   Entrepreneurs   Network Users   Crypto-enthusiasts

Issue: In the current model of Information distribution people face constant flows and redundancy of "pre-paid" or "popular" information with unknown source, authors and reliability. Also, an average Internet user has little to no practice of dealing with cryptocurrencies in his/her daily financial routine. This field still remains an uncontested domain of traders, speculators or cryptofans linked to it as their professional playground. A casual user passes before loads of data on coin acquisition, safekeeping and realisation, total chaos in price and fee logic of exchanges and wallets, complexity of interfaces and a sheer number of trade hubs with uncertain level of trust. Let us face it: nearly 95% of potential active contributors are still unaware of or unwilling to enter the world of electronic currencies.

Solution: Twigse information distribution model is arranged on subscriptions base. Also, information is sorted by authors and sources. Use of Blockchain technologies provides the reliability of the data, and rating system helps to validate it according to the audience opinion.

Twigse offers users to create an account with all modern social media features in 1 minute and to get all options to use cryptocurrencies in everyday life in exactly the same time period. An instant access to lightning-fast transfers to friends and family up to purchase of goods or subscribing to a favorite periodic. All this is 100% clear and easy even for a senior age user. A cherry on a cake is that all transactions within the platform are free of charge and resemble any standard internet banking like twins.
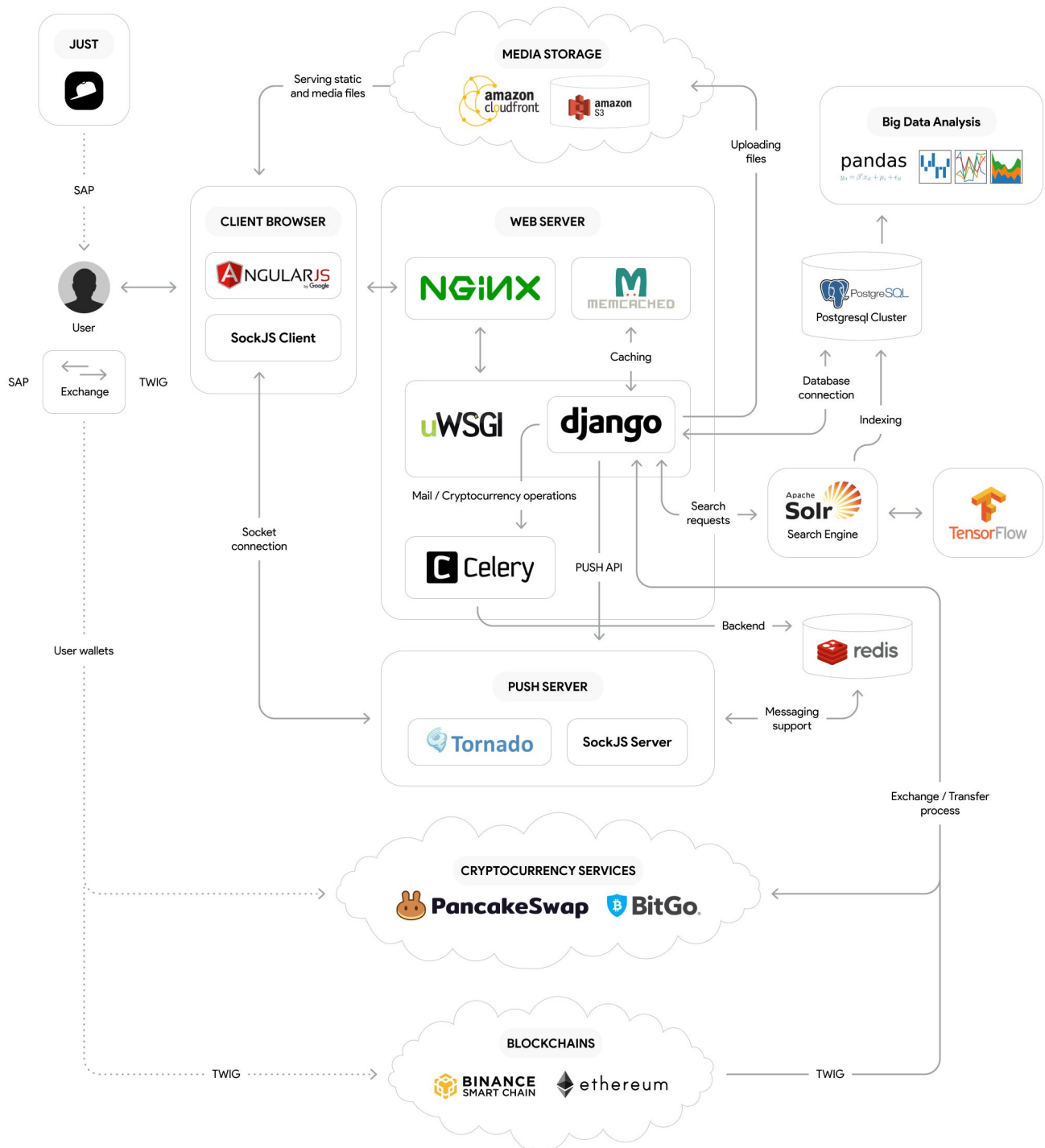
Financial opportunities

- Automatic creation of cryptocurrency accounts when registering an account or an additional profile;
- Account replenishment from third-party services;

- Withdraw funds from an account to a card or bank account;

- Purchase and sale of cryptocurrencies for fiat;

- Opening a deposit account (PoS) in TWIG with an annual return of 13%;

- Fiat conversion into cryptocurrencies at the exchange rate at the time of conversion;

- Opportunity to profit from the difference in the rate when converting more than 20 types of cryptocurrencies;

- Instant transfers to users and Companies in Twigse;

- An opportunity to monetize sports training for the whole family;

- Opportunities to use credit funds provided by companies within the platform, providing coins or other forms of deposit through DeFi banking;

- Purchase of goods and payment for services in the platform directly, in Timelines, chat rooms or Marketplaces and Companies;

- Storage of savings in different cryptocurrencies on several accounts.

5. Technologies

Twigse technologies overview

JUST

Serving static
and media files

MEDIA STORAGE

amazon cloudfront · amazon S3

Uploading
files

Big Data Analysis

pandas

SAP

User

CLIENT BROWSER

ANGULARJS by Google

SockJS Client

WEB SERVER

NGINX · MEMCACHED

Caching

uWSGI · django

PostgreSQL
Postgresql Cluster

Database
connection

Indexing

SAP · Exchange · TWIG

Socket
connection

Mail / Cryptocurrency operations

Celery

PUSH API

Search
requests

Apache Solr
Search Engine

TensorFlow

Backend →

redis

User wallets

PUSH SERVER

Tornado · SockJS Server

Messaging
support

Exchange / Transfer
process

CRYPTOCURRENCY SERVICES

PancakeSwap · BitGo

BLOCKCHAINS

BINANCE SMART CHAIN · ethereum

TWIG

TWIG

List of technologies used for development

Python, ver. 3.7	https://docs.python.org/3.7/
Django, ver. 2.2	https://docs.djangoproject.com/en/2.2/
AngularJS, ver. 1.3.15	https://code.angularjs.org/1.3.15/docs/api
Nginx, ver. 1.14	https://nginx.org/en/docs/
Memcached, ver. 1.5.6	https://memcached.org/
Redis, ver. 5.0.3	https://redis.io/documentation
Celery, ver. 3.1.16	https://docs.celeryproject.org/
Apache Solr, ver. 6.6.6	https://lucene.apache.org/solr/
PostgreSQL, ver. 11.6	https://www.postgresql.org/
Tornado, ver. 4.5.3	https://www.tornadoweb.org/en/stable/
SockJS-tornado, ver. 1.0.5	https://github.com/mrjoes/sockjs-tornado
Amazon S3	https://aws.amazon.com/s3/
Amazon CloudFront	https://aws.amazon.com/cloudfront/
Ethereum API, ver. 1.0.0	https://ethereum.org/en/developers/
Pancakeswap Open API	https://github.com/pancakeswap/pancake-info-api
Bitgo API, ver. 2.0.0	https://test.bitgo.com/api/v2/
Tensorflow, ver. 2.0.0	https://pypi.org/project/tensorflow/
Pandas, ver. 0.25.3	https://pandas.pydata.org/

BSC API:

Truffle ver. 5.3.10	https://trufflesuite.com/truffle
Ganache ver. 2.5.4	https://trufflesuite.com/ganache
Python-binance ver. 1.0.12	https://python-binance.readthedocs.io
Binance API	https://binance-docs.github.io/apidocs

6. DeFi banking
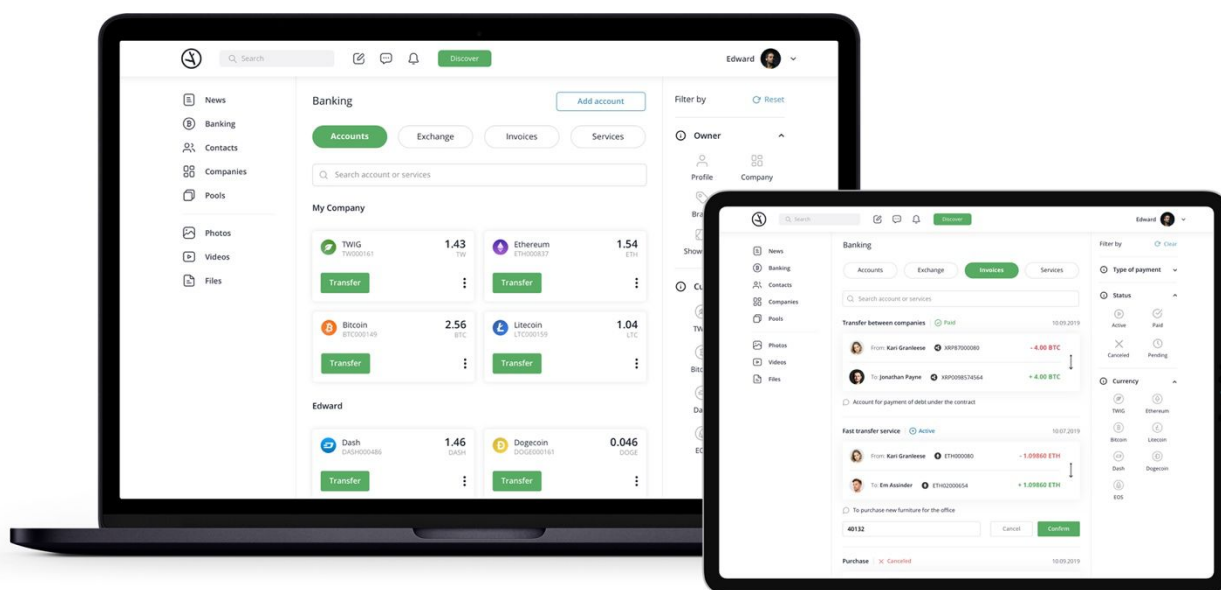
Twigse combines capabilities of financial and digital services into a single multi-functional cryptocurrency banking, which allows users and companies to conduct all types of financial transactions with 50+ well-known coins and tokens.

In addition to standard banking and financial solutions, Twigse banking uses an innovative DeFi lending system based on the BNB Smart Chain (BEP20) smart contract integrated into the platform.

At the same time, Twigse's DeFi banking solutions will have cardinal differences with existing services, since lenders will not be the platform itself, but any company or Community created by users will be able to conduct lending among themselves.

The platform will present unique opportunities to provide loans with a standard service that will exist in the list of all banking services when opening a pool or company in the platform.

The deposit will be, in addition to standard solutions, BUSD stable coin for the issuance of the TWIG token and for the game on the exchange rate difference, when the loan is returned, a standard bank deposit in the form of fixed assets of the company or the provided goods.

In Twigse platform, it will be possible to bookmark your company's page, where the main asset will be the company's unique user base and the page content, which is the main asset of any company on the Internet.

All agreements on loan interest, terms and deposits will be negotiated by users separately.

DeFi services for companies' scheme
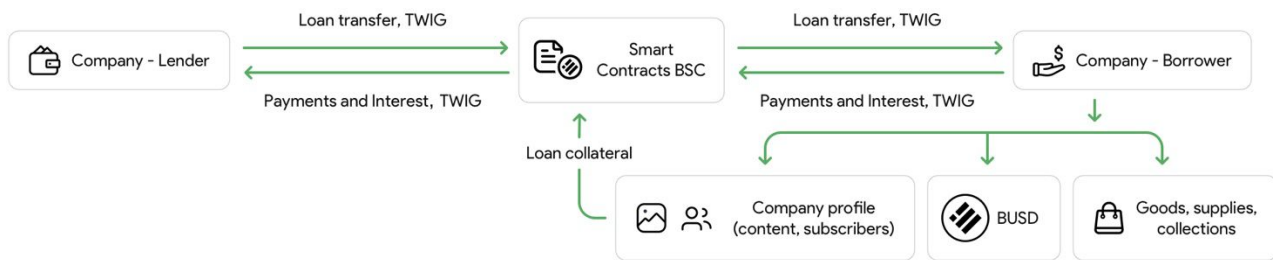
A collective financing and lending scheme will be implemented on the basis of Pools - Communities. Partner companies within Communities will be able to jointly create investment funds and lend to third-party Communities, where credit can be distributed to several companies simultaneously with different degrees of responsibility.

Joint accounts will be created within the Community with the possibility of making mutual contributions from partner companies, followed by transferring the loan amount to a joint account in the Community - borrower, and then distributing the loan amount to several partner companies within the Community. In parallel, escrow accounts of borrowers ' companies will be created in the Pool with a deposit on the loan covering the entire amount of the Community loan. The Pool borrower will be collectively responsible for the loan funds distributed across the companies. This will allow us to conduct financing schemes for many projects simultaneously and conduct international projects in different parts of the world, completely changing the rules of the game in the banking sector.

DeFi services for Pools – Communities scheme
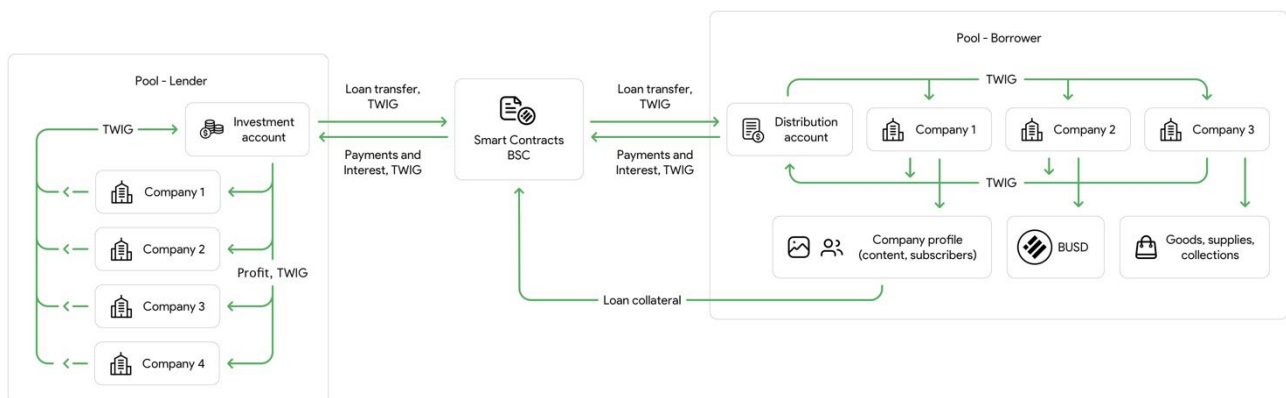
In the DeFi lending scheme, the parties (the lender and the borrower company) will be reliably protected from default on their obligations. Through the Ethereum blockchain, all transactions will be transparent and protected from deletion and modification. If the loan repayment conditions are not met, the deposit will automatically become the property of the lender company by changing the company administrator or debiting the deposit amount from the borrower's escrow account. All

operations are fully automated and will meet the contract conditions that were originally invoked with a digital signature.

6.1 Features of the Twigse platform DeFi banking

6.1.1 User features:

- Automatic creation of a personal account when registering Twigse account or an additional profile;
- A simplified system of access to accounts and signing transactions via SMS code that completely repeats the usual Internet banking;
- Opportunity to cancel fraudulent transactions and return money to the owner inside the platform;
- It is not possible to permanently lose access to accounts if you lose the code, as in ordinary hot wallets, since accounts are account-linked and you can always restore access using your smartphone;
- Account replenishment;
- Cryptocurrency exchange;
- Instant transfers to other Twigse users;
- Receiving transfers from other platform users;
- Purchase of goods and payment for services in the platform directly, in timelines, chat rooms and Communities;
- Storage of funds in different cryptocurrencies on several accounts;
- The opportunity to earn users on the extraction of TWIG tokens through the partner mobile application JUST;
- Opening several accounts on different user profiles and distributing cash flows without mixing the activity focuses;
- Use of credit funds provided by companies and Communities with coins or other forms of deposit through DeFi banking;
- Financing and conducting transfers to communities, both your own and other users';
- All operations are anonymous and impersonal;
- Full protection against deleting, changing or opening operations, by protecting accounts and user account with a digital signature by means of SMS code on a verified smartphone number;
- Full analytic of financial transactions in the user profile similar to traditional Internet banking.

6.1.2 Company features:

- Automatic creation of a personal company account when creating with a link to the company URL;
- Replenishment of the company account;
- Purchase and sale of cryptocurrencies for converted currency;
- Opportunity to conduct lending between companies and platform users, with fixation of unique contractual terms for securing loans and loan interest through the platform's DeFi banking capabilities;
- Currency conversion into cryptocurrencies at the exchange rate at the time of conversion;
- Payment of wages to company employees;
- Creation of accounts on all types of company privacy: open, closed, hidden, private;
- The ability to sell users tangible goods in the timelines, companies and chat rooms with instant transfers of cryptocurrencies to the account;
- Connect company accounts to the corporate financial network in Communities;
- Acceptance of several types of payments from users: direct transfers, payment for goods, payment of subscription, crowdfunding, donations;
- Instant transfers between companies;
- The ability to sell your company to other users, while maintaining subscribers and content;

6.1.3 Community features:

- Automatic creation of a personal account of the Community when creating with reference to the Community URL;
- Account replenishment;
- Cryptocurrency exchange;
- Salary payments to company employees;
- Creation of accounts for all types of community privacy: open, closed, hidden, private;
- When creating inside the Community or companies, a corporate system for distributing the financial flows of an organization with a merge of accounts and operations is created;
- Opportunity to sell users tangible goods and content in the Timeline, Community blocks and platform chats with instant transactions of cryptocurrencies to the account;
- Acceptance of several types of payments from users: direct transfers, payment for goods, payment of subscription, crowdfunding, donations, membership fees for organizations;
- Lending to partner companies and users of Communities, with opportunity to contribute working capital from several companies to common credit fund of the Community;

- Profit distribution between a large number of independent but merged into Community companies;

- Instant transfers between companies;

- Receive fees by Communities from the financial transactions of companies involved;

- Opportunity to sell a Community to other users and Communities.

7. Business model and monetization

The Twigse platform combines original functionality and elements of already existing and popular models - specialized management systems, online payments, analytical systems, marketplaces, and social networks.

Due to this, the Twigse monetization model includes both a number of traditional and time-tested solutions - subscriptions and additional paid instruments, bank fees, credit rates, sales commissions, and original niche methods - such as promotion opportunities in the form of advertising company presentations to attract the attention of other users, placement of advertising posts and ads, etc. The Twigse platform also offers institutional investors and platform users one of the most trending forms of investing - TWIG platform coin investing. Given the platform's evolution and increasing user traffic, the token's internal cash flow will increase progressively, leading to an explosion in demand for TWIG while supply decreases. The limited issuance of the TWIG token through a unique "green mining" algorithm, user demand for TWIG to buy goods and place amateur sports bets, plus the issuance of credit in the token to platform users and companies, will result in an increase in market value that could pay dividends in the future and make saving in TWIG much more profitable than in other currencies.

Tokens earned by the platform on the services provided to users can be exchanged in the exchange market for BNB or partially withdrawn from circulation and burned, to maintain the market capitalization of the main cryptocurrency platform TWIG.

The main directions of monetization

1

Freemium model

Monthly subscription for companies and pools:
Company/Brand - **$10** per month;
Pool/Showroom - **$20** per month;
User Profile - free.

2

Paid ads

Payment for paid announcements and releases, visible to all platform users and guests in the «Flow» section, by companies.

3

NFT

Selling your own NFT collections and collections of partner applications, commission from the sale of NFT users.

4

Currency conversion

A commission is charged for each transaction and currency pair conversion.

5

Crediting

The platform's commission percentage in each loan issued by the companies.

6

Services

Platform commission on transactions in paid subscription services, crowdfunding or donations.

7

Funds transfers and withdrawals

The platform's commission percentage for transactions between different companies (outside the Pools) and the withdrawal of funds to accounts into other services.

8

Green Mining

Remuneration accrued to the platform from each TWIG coin issued in exchange for SAP.

8. Allocation & Pricing

TWIG

Summary

Description	Details
Ticker	TWIG
Token type	BEP 20
Maximum number of mined tokens	9,200,000,000

With Twigse, you can connect your employees to a unique "green mining" algorithm that converts the energy expended during exercise into TWIG cryptocurrency. The algorithm reads data from users' smartphones or smart watches connected to the JUST affiliate app with the move-to-pay model and pays a reward like classic mining when a person replaces a video card. The JUST app supports more than 60 sports, including fitness classes, and is suitable for use by the whole family. Athletes are rewarded in SAP (Sports Activity Points), which can be exchanged 1 to 1 for the platform's main cryptocurrency TWIG.

It is not possible to issue TWIG without converting the energy expended by users during sports activities. TWIG issuance (unlocking) is fully synchronous with SAP mining, where human energy is the deposit for each TWIG unit. The platform's "green mining" algorithm ensures environmentally friendly cryptocurrency mining without electricity costs and fully protects TWIG capitalization from unsecured issuance.

TWIG is a coin that supports the Proof-of-Stake algorithm, which works on the principle of proof of ownership. This algorithm is completely eco-friendly due to the lack of electricity consumption, significantly increases the speed of transactions in the blockchain system and helps to maintain the market price of TWIG in relation to more common coins such as BNB, ETH, BTC, etc., making it more stable and predictable for users. Users interested in a stable passive income can join the TWIG liquidity pool on the PancakeSwap exchange and become investors in TWIG with the opportunity to receive compensation in the form of new units and commission fees.

TWIG will allow users and companies to carry out almost all types of banking financial transactions within the platform, based on the platform's internal digital asset. Entrepreneurs and users, using TWIG

in turnover, will receive exclusive advantages in comparison to other cryptocurrencies used in the platform, such as:

- Interest-free platform services;
- Interest-free buying and selling of NFT collections in the NFT section of the Twigse platform;
- Ability to bet on sports and amateur tournaments in affiliate applications
- Earning the whole family on sports activities
- Saving on transactions costs and time;
- Other pleasant bonuses and rewards.

Token Allocation Plan

92%
Green Maining

5%
Staking Reserve

3%
Utility – Future Cooperation
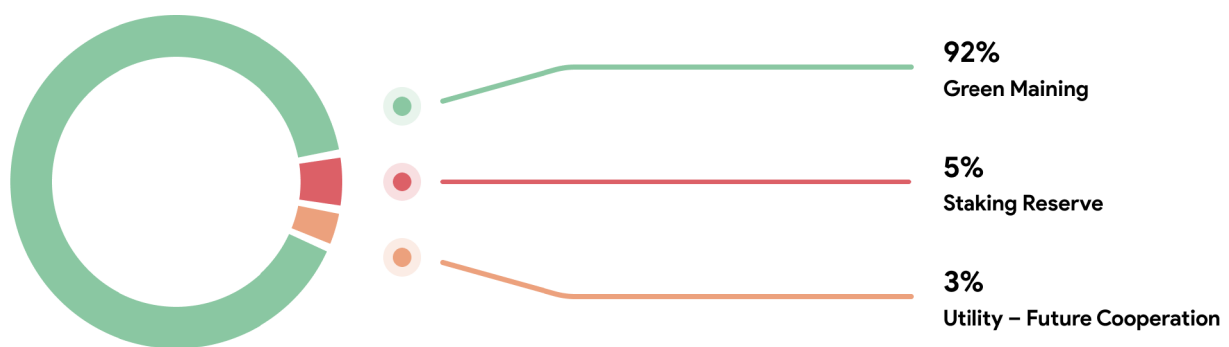
- Green Maining — 9,200,000,000
- Staking Reserve — 500,000,000
- Utility - Future Cooperation & Affiliation — 300,000,000

Role	Description
Green Maining	The maximum number of TWIG tokens that can be mined by users in affiliate applications when converting spent energy when engaged in sports;
Staking Reserve	Applicable to stabilize the exchange rate or payout to users when staking an account in the TWIG token platform. This amount of tokens will be reserved to maintain the TWIG token market making.
Utility – Future Cooperation & Affiliation	Business development, including scaling the business and partnering with sports organizations, federations and leagues, creating a fund to promote the TWIG token to promote it as a means of payment.

Token Vesting

An overview of how we plan to allocate our vesting is broken down below:

Token Allocation	%	Vesting
Green Maining	92%	Unlocking occurs only when the user exchanges mined SAP at the rateof1SAP=1TWIG.
Staking Reserve	5%	Accrued to users for long-term steaking in a TWIG account, up to 18% per annum.
Utility – Future Cooperation	3%	TWIG accrual to partner sports organizations in the amount of up to 20% plus of the amount of SAP mined by their members in the first year of platform development

Functional opportunities

Although Twigse platform will be host to more than 20 cryptocurrencies for transactions, the TWIG coin will have all of the innovative features of mainstream tokens, yet has its own unique solutions which include:
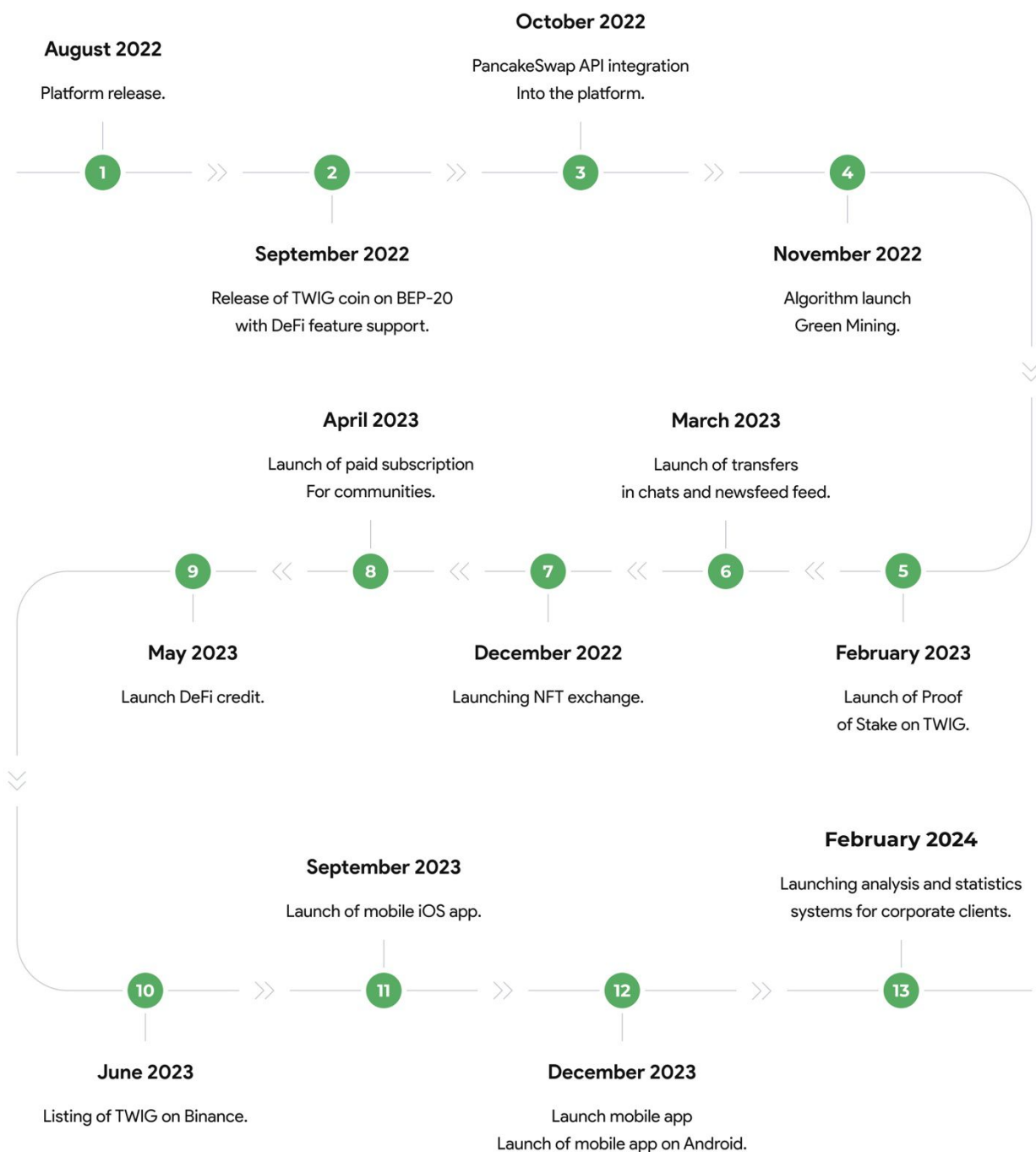
- High speed transactions from transfers to exchange sessions (up to 0.3 sec);
- Zero commissions on any TWIG transactions within the platform;
- Complete safety and anonymity on all activities executed via TWIG;
- Options for paid subscriptions, crowdfunding and donations to companies and Communities in Twigse;
- Interest-free payment of internal paid community promotion platform services;
- Security of payments between users and companies with refund opportunities in case of fraudulent transactions confirmation;
- Opportunity to earn TWIG on a deposit account with interest for the period;
- Account security from code loss and quick recovery of account access.

The platform team will provide the broadest support for the internal coin development, and the following unique features will be launched in the first half a year after TWIG exchange listing:

- Opportunity for users and companies to conduct lending in TWIG within the platform through the BNB Beacon Chain smart contract and earn on loan interest using DeFi features of Twigse banking;
- Opportunity to buy/sell TWIG for fiat currencies for interest-free;

- Linking TWIG to smart contracts, which allows to protect transactions with reservation of the token in the account and then debiting the counterparty after completing all the points specified in the contract;

9. Technological Roadmap for 2 years

August 2022

Platform release.

October 2022

PancakeSwap API integration
Into the platform.

September 2022

Release of TWIG coin on BEP-20
with DeFi feature support.

November 2022

Algorithm launch
Green Mining.

April 2023

Launch of paid subscription
For communities.

March 2023

Launch of transfers
in chats and newsfeed feed.

May 2023

Launch DeFi credit.

December 2022

Launching NFT exchange.

February 2023

Launch of Proof
of Stake on TWIG.

February 2024

Launching analysis and statistics
systems for corporate clients.

September 2023

Launch of mobile iOS app.

June 2023

Listing of TWIG on Binance.

December 2023

Launch mobile app
Launch of mobile app on Android.

10. Twigse team

Pavel Perelomov, CEO

More than 15 years of management and more than 7 years of IT experience. Has performed as a manager of a full-circle manufacturing enterprise with 300+ personnel. At the moment carries out two international startups in the fields of sport and blockchain together with personally selected teams.

Alexander Selevko, CTO

More than 15 years of experience in information technology. Professional mathematician, has spent many years developing web applications, platforms and creating online stores. Has the deepest understanding of blockchain and cryptocurrencies.
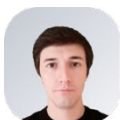
Stanislav Egarmin

Developer (Back-End, Front-end), technology and organisation expert. More than 12 years of IT experience.

Anton Kostyukov

Developer (Android, IOS), technology expert. More than 10 years of IT experience.

Maxim Reshetnyak

Developer (Haml, HTML 5, CSS). More than 8 years of IT experience.

Nikita Katsevich

UI, UX design. More than 7 years of IT experience.

11. Conclusion

This document describes and substantiates the statement of the problem of developing a comprehensive social solution on "Digital Twin" basis in the framework of a platform business model.

As a solution, a ready-to-release product developed by the Twigse team, realizing the concepts of Digital Economy and Digital Management in the form of a Blockchain-based platform with an intuitive interface, an integrated smart contract system, an analytical system based on Big Data and AI technologies, as well as De-Fi banking system based on digital assets operations, is presented.

The platform's functionality is described, which includes universal tools for management, governance, development, partnerships for both administrative units and municipal structures, and various types of businesses (B2B, B2C, medium, small, large), which can significantly reduce costs and speed up the scaling process.

The platform monetization, the tokenomics of the TWIG internal coin are described, the Roadmap of the project for 2 years is presented and the prospects for its development are given.

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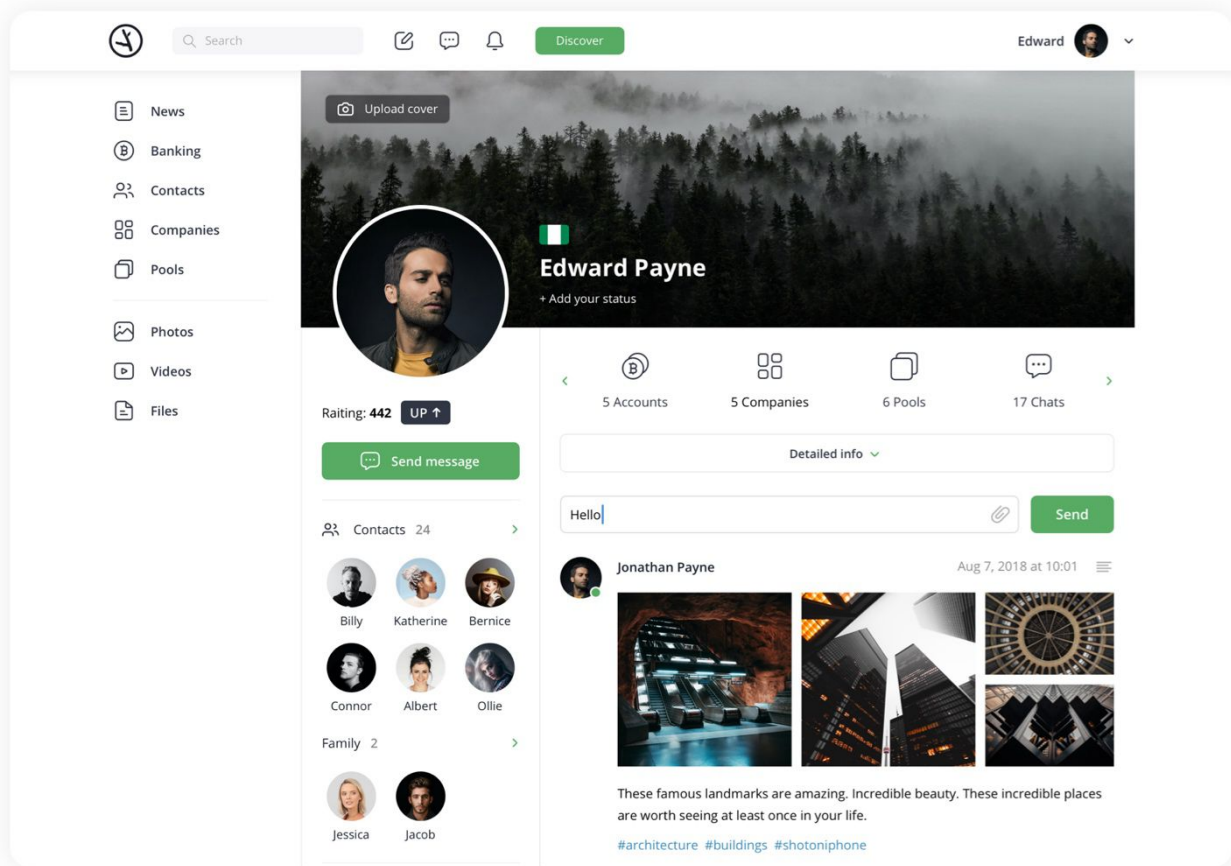
Appendix 1. Twigse platform technical solution

Project structure
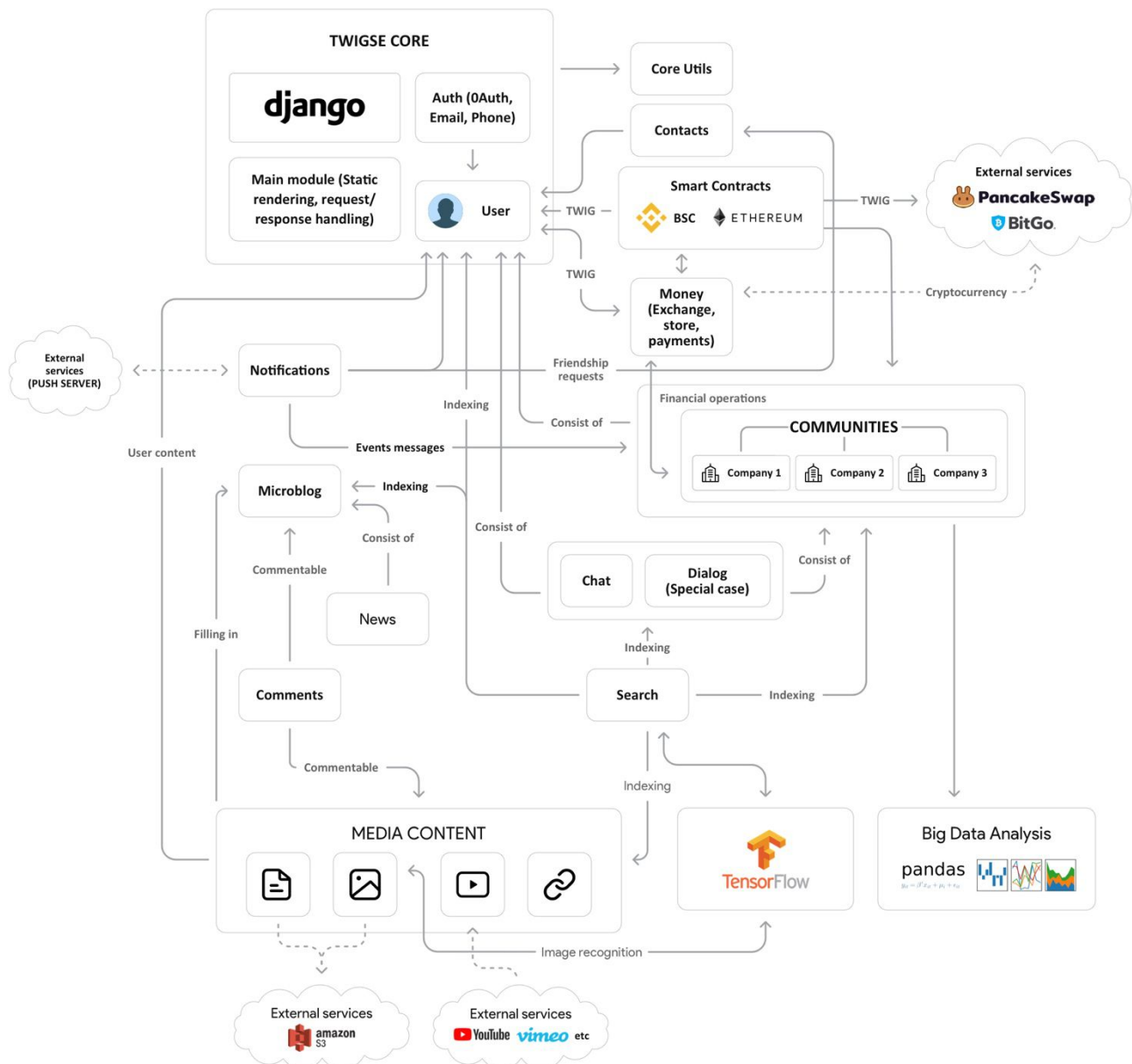
Functionality

User Account

Account registration

The following registration and login methods are implemented:

- Mobile phone number;
- Email address of the postal service;
- Facebook account;
- Twitter account;
- "LinkedIn" account;
- "Vkontakte" account;
- "Google+" account;
- "Tumblr" account;

The account password can be recovered via email or mobile phone number.

The user is asked for providing the basic information:

- First Name
- Last Name;
- Sex;
- Date of Birth;
- Timezone.

Account settings

Account settings includes the following sections:

- Profile settings. Expanded input and editing of the profile information, as well as rules for displaying this data to other users;
- Profiles management. Switch between the user profiles linked to the accounts;
- Contact information. Input and editing of the user contact information;
- Important info. In this section the user can add/edit important information – mobile phone number, email, account password, interface language, etc.
- Banking
- Settings for banking operations;
- Account Verification;
- Account settings for currencies and cryptocurrencies exchange
- Huobi account settings (logging into account, adding a payment card to an account, detaching a payment card from an account, exchange rates).

Rating System

Each user has his/her personal rating, that can be increased/reduced by other users.

User Profiles

Up to 5 User profiles can be created for each account.

The following functionality is implemented:

- Feature set/edit user avatar;
- Feature to set/edit the cover;
- "Online / Offline" status display;
- Feature to add a short message, visible for all users (Status);
- User Timeline for publishing posts, links, articles and user-created content;
- Brief user-specified information (date of birth, gender);
- Features to up / down profile rating;

- Various navigation tools that simplify access to Twigse features;

Anonymous profile

Anonymous profile can be created by user to improve the privacy protection level.

Special features:

- Anonymous profile is not indexed in Twigse users lists and search engines;
- Anonymous profile data (avatar, name, content, pages, communities, activities) is displayed only to the profile contacts. Other users can see the mask and nickname, all the profile content and contacts are hidden.

Each profile contains the following sections:

News

The Timeline, displaying all publications of marketplaces and pages added by User, of the users from the contact list - with filters by content type and content source.
The following user actions in the Timeline are implemented:

- Like a post;
- View a list of users who liked a post;
- Write a comment for a post and respond to other comments;
- Share posts with a contact or send a post to page or community;
- Save a post to the Timeline;
- Open a post in a separate viewing tab.

Activities

In this tab, the user can view all the content posted by his contacts sorted by content blocks – posts, photos, videos, tracks.
The following user actions are implemented:

- Add contacts;
- Registration of subscriptions;
- Subscription and participation in new marketplaces or pages,
- Participation in chats.

Actions in user contacts communities and pages:

- Adding new content;
- Adding new subscribers,

- Merging pages;
- Entry of new pages into the community,
- Conducting elections.

Comments

In this tab, the user can view all his/her own comments on posts and responds to them in chronological order, as well as comments on posts that his contacts add.

Search

News search by keywords and tags, filtered by content type and source. User can view the content posted by users, pages and communities.

Recommended

In this tab, the user can view the content personally recommended by the Smart Assistant, created on the base of the Machine Learning algorithms.

Banking

The following user actions are implemented:

Accounts

- Create, edit and delete cryptocurrencies accounts (TWIG, Bitcoin, Etherium, BNB, USDT, BUSD, Dash, DogeCoin, EOS etc. - 20+ cryptocurrencies in total);
- View all user accounts – both personal and business ones, belonging to the user communities and pages;
- Replenish the account or withdraw funds from the account to third-party services;
- Customize the display of accounts by type of currency and / or owners;
- Filter accounts by currency or owner;
- Store cryptocurrencies in secure accounts;
- Open deposit accounts (PoS) in TWIG with an annual return of 13%;
- Transfer funds to contacts, pages and communities.

Exchange

- View the rates of 50+ cryptocurrencies;
- Choose and exchange cryptocurrencies without orders volume limitations;
- Add electronic signature to confirm operations via SMS sent to a verified user phone number.

Invoices

- View all the operations proceeded in Twigse banking;
- Sign the invoice using SMS verification or Quick Confirmation in case of transactions between the user accounts;
- Filter invoices by operation type, cryptocurrency, progress status.

Services

- Fast Transfer Service – used for proceeding quick transfers to guests of a user's page;
- Donation - used to manage donations from contacts and subscribers.

Contacts

All contacts

Contact list with advanced filtering features, as well as quick access to search for new contacts.

The following user actions are implemented:

- Filter users by age, field of activity, education, role, marital status, etc.;
- Write a message to the contact;
- Temporary block the contact;
- Add the contact to the black list and delete;
- Search for new contacts.

Subscriptions

List of subscribers and list of subscriptions with advanced filtering features.

Requests

List of friend requests from other users and list of the requests sent by the user.

Pages

There are 2 types of Pages to be created:

- Company;
- Brand.

User can create an unlimited amount of pages from each profile.

User pages

User pages contains a list of pages created by user with an advanced filtration features.

The following actions with pages are implemented:

- Quick access to the page creation functional;
- Edit the page;
- Delete the page;
- Filter the list of pages by type, category, geo, privacy status;
- Invite a contact to the page;
- Send request from the page to join community;
- Add page to the community belonging to the same user;
- Merge two pages, belonging to one user;
- Send request to merge with page another users pages.

Invitations

Lists of the following invitations and requests:

- Requests sent by the all user pages;
- Invitations sent by other users' pages to the user pages;
- Invitations sent by communities to the user pages;
- Invitations to merge with other users' pages.

Subscriptions

List of pages the user subscribed, as well as quick access to search for new pages.

The list can be filtered by page type, categories, privacy status and geo.

Communities

There are 2 types of Communities to be created:

- Marketplace;
- Publicity.

User can create an unlimited number of communities from each profile.

User communities

List of communities, created by the user, with an advanced filtration features.

The following actions with communities are implemented:

- Quick access to the community creation functional;
- Edit the community;

- Delete the community;
- Filter the communities by type, category, geo, privacy status;
- Invite a contact to the community;
- Invite a contact page to the community;
- Add user's page to the community;
- Create a new page in the community.

Invitations

Lists of the following invitations and requests:

- Invitations sent from all user communities;
- Invitations sent to third-party communities;
- Requests from third-party pages to join the community.

Subscriptions

List of communities the user subscribed, as well as quick access to search for new communities.

The list can be filtered by page type, categories, privacy status and geo.

Photo

The following user actions are implemented:

- Upload, download, view images;
- Edit images, using filters and special tools;
- Create and edit albums for images cataloged storage and sorting.

Video

The following user actions are implemented:

- Upload, download, view videos;
- Add video from third-party resources via direct links (YouTube, Vimeo, Coub, DailyMotion);
- Create and edit albums for video cataloged storage and sorting.

Music

The following user actions are implemented:

- Upload, download, play tracks;
- Audio player with advanced functionality for playing user audio files;
- Create and edit albumns for music cataloged storage and sorting.

Files

The following user actions are implemented:

- Upload, download, store, view files in the following formats: png, jpg, gif, psd, doc, docx, xls, xlsx, ppt, pptx, rtf, pdf, djvu, fb2, ps and others;
- Create and edit albums for files cataloged storage and sorting.

Discover

This section contains general search among all Twigse content and smart recommendations.
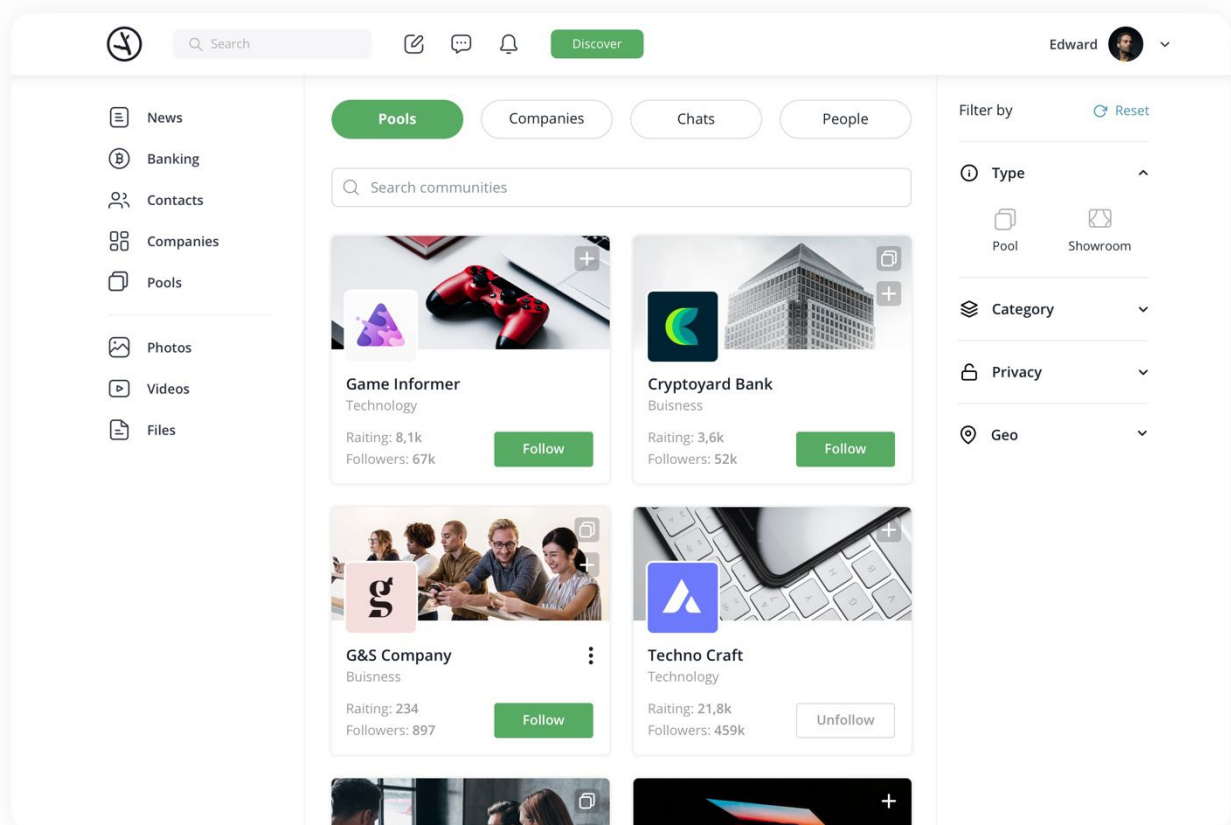
People

Search of people by keywords and the parameters: online presence, rating, geolocation, profession, age, education, position, gender, marital status. In this section user can send friend requests or subscribe to another users.

Companies

Search of pages by keywords and parameters: type, category, privacy status, geo. In this section user can subscribe to pages or send requests to join. Each page preview contains information about its communities with quick access to subscribe to these communities.

Communities

Search of communities by keywords and parameters: type, category, role, privacy status, geo. In this section user can subscribe to communities or send requests to join. Each community preview contains information about its members with quick access to subscribe to these pages.

Chats

Search of chats by topic keywords and parameters: type, category, role, privacy status, geo. This section contains chats of profiles, pages and communities. User can send request to join chat.

Notifications

This section contains all the notifications about various events and actions with quick access to the corresponding section.

Editor

There are two types of forms to create and send posts:

- Microblog - quick and short messages (up to 520 characters) editor with an opportunity to create multi-content posts (photos, videos, audio, links, documents);
- Blog - large, multifunctional text editor. More than 30 functions for the content formation, editing and viewing; creation of articles of up to 60,000 characters. Opportunities to create multi-content articles.

Both types of editors supports the following functions:

- Extension of the text input form in full screen;
- Opportunity to select community from the list to send an article or post to its Timeline;
- Opportunity to attach # tags to posts and articles.

Messages
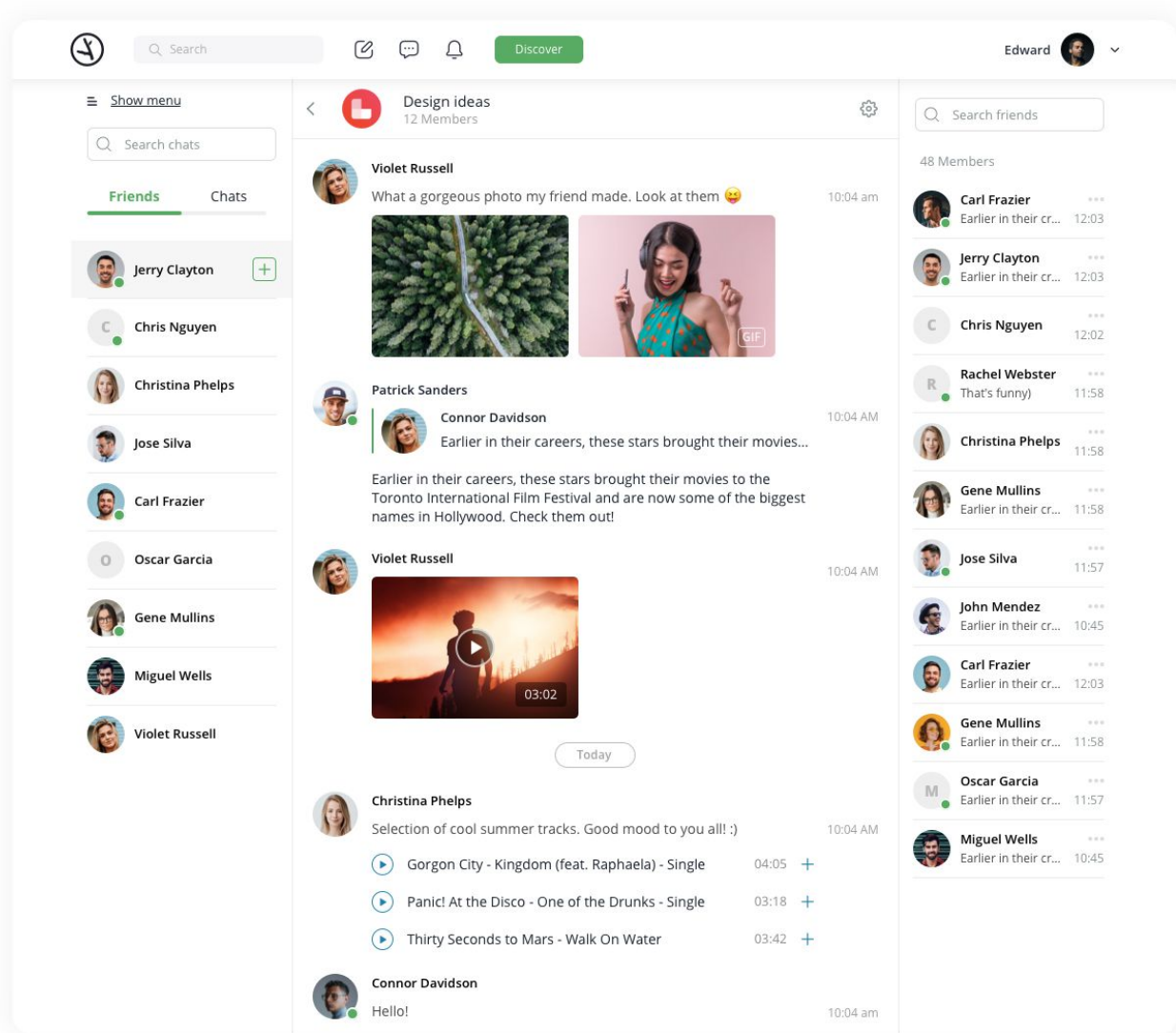
Dialogues

This section contains user dialogues with the following features:

- List of dialogues with the message viewing status;
- Feature to create dialogue with contacts and other users;
- Feature to share any type of content in the dialogues – play video, track, view photo, documents, links;
- Quick switch from dialogue to chat and vice versa;
- Quick access to the lists of dialogues and chats from the messages viewing section.

Chats

This section contains user chats list with the following implemented features:

- Quick chats search by keywords;
- Filter chats list by the following parameters: privacy, geo, category, owner;
- Create and delete chat;
- Edit chat data – cover, name, category, geo, privacy;
- Add chats to the list of favorites.

Pages (Companies, Brands)
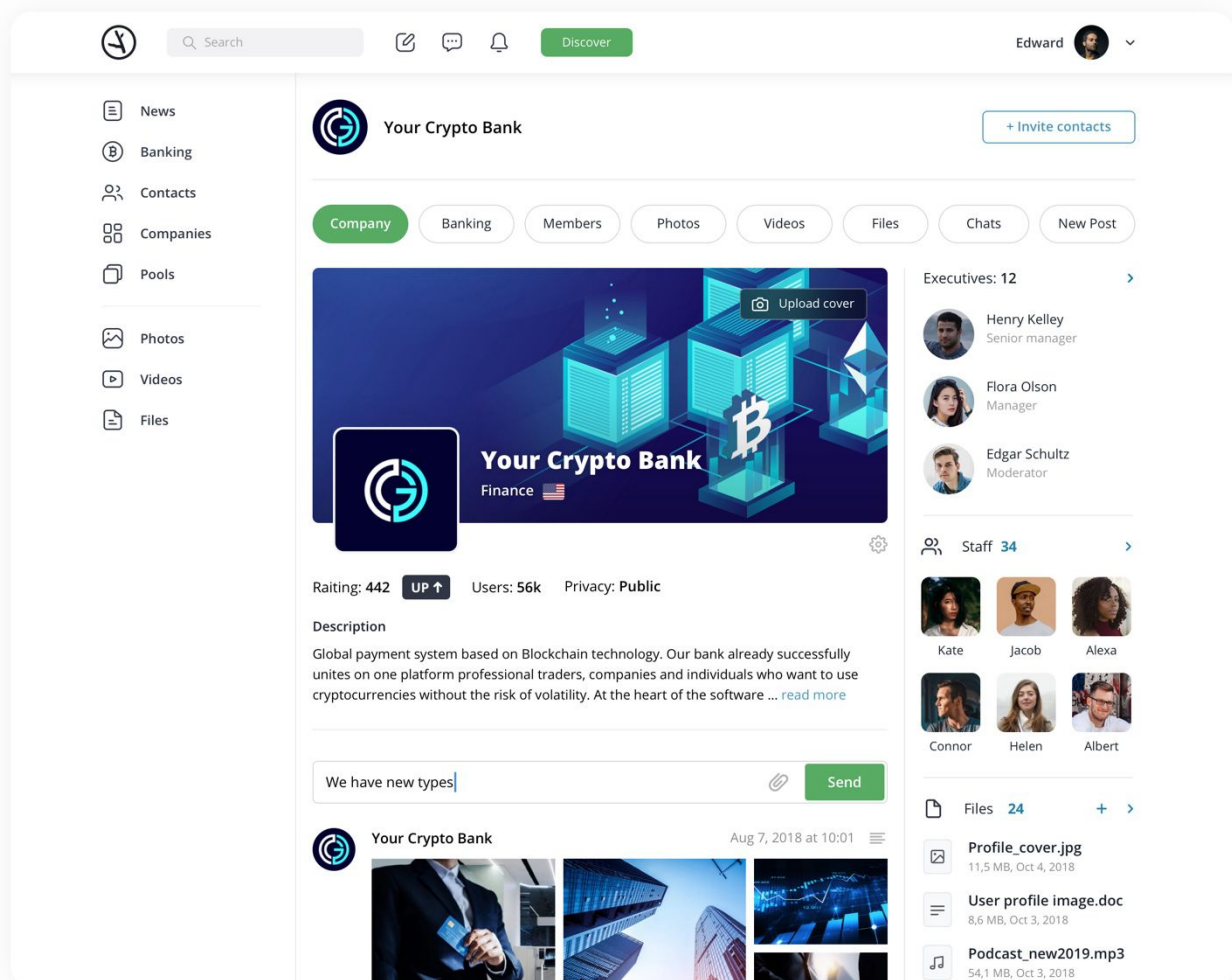
User can create an unlimited amount of pages for each profile.

Creating a new page, user have to choose the **page type**: company or brand.

Page settings:

- Name;
- Role;
- Category;

- Privacy status;

- Description;

- Site;

- Country / City;

- Members permission to add content to the page timeline.

Page privacy status:

- Open – visible to all users, subscription and participation is carried out without a request by any user;

- Closed – subscription and participation is carried out only upon user request;

- Private – participation is arranged only by invitation from administrator/owner;

- Hidden – anonymous pages. Not visible in lists, not indexed in search engines, not visible for contacts in lists of user pages. Participation by invitation only.

Page basic features:

- Send request to join the page;

- Increase / decrease the page rating;

- View the page leaders and members;

- View the page timeline and react to its content according to the page privacy settings;

- Quick access to the page photos, video, files;

- Invite other users to the page;

- Unsubscribe from the page news.

Members

This section includes the list of the page members with an advanced filtering features. Users can interact with the page members and manage them according to the page privacy settings and his/her role.

Communities

This section contains the list of the communities the page has partnerships with.

The following actions are available:

- Leave the community;

- Subscribe personally to the community;

- Block the community and delete it from the list;

- Filter the community list by type, category, privacy status, geo;

- Quick search of the communities to arrange new partnerships.

Subscribers

Contains a list of the page subscribers.

The following actions are available:

- Appoint an administrator role;
- Assign a position;
- Add to contacts;
- Temporary block;
- Add to the black list and delete;
- Filter the subscribers list by the following parameters: Online / Offline, rating, geolocation, profession, position, age, education, gender, marital status;
- Quick access to new subscribers' invitation.

Page banking

The following features are implemented:

Accounts

- Create, edit and delete cryptocurrencies accounts (TWIG, Bitcoin, Etherium, BNB, USDT, BUSD, Dash, DogeCoin, EOS etc. - 20+ cryptocurrencies in total);
- View all Page accounts;
- Replenish the account or withdraw funds from the account to third-party services;
- Customize the display of accounts by type of currency and / or owners;
- Filter accounts by currency or owner;
- Store cryptocurrencies in secure accounts;
- Open deposit accounts (PoS) in TWIG with an annual return of 13%;
- Transfer funds to contacts, pages and communities;
- Opportunity to pay salary to page members and community partners.

Exchange

- View the rates of 50+ cryptocurrencies;
- Choose and exchange cryptocurrencies without orders volume limitations;
- Add electronic signature to confirm operations via SMS sent to a verified user phone number.

Invoices

- View all page operations proceeded in Twigse banking;
- Sign the invoice using SMS verification or Quick Confirmation in case of transactions between the user accounts;
- Filter invoices by operation type, cryptocurrency, progress status;

Services

- Fast Transfer Service – used for proceeding quick transfers to guests of the page;
- Donation - used to manage donations from members and subscribers;
- Subscription - paid subscriptions for a certain time period for page members;
- Crowdfunding – funding campaigns for specific purposes for page members and guests with a fixed time period.

Pages merging

- It's possible to merge user pages, as well as pages belonging to different users;
- When merging pages, the main rights of the new page go to the owner of the receiving company, the owner of the second page gets limited administrator rights;
- When merging pages, all information and content - video, photo, track, files - are combined and added to the corresponding sections of the new page;
- When merging pages, all the members of both pages become members of the new page;
- All posts of the two pages are added to the new page timeline, maintaining synchronism and posting time.

Partnerships with communities

Pages can arrange partnerships with communities:

- Joining open and closed (after the request acceptance) communities;
- Joining community, the page owner becomes one of the community administrators with limited rights;
- Page can leave the community any time without loosing members and content.

Smart contracts conducting

Pages can create smart contracts based on the EOSIO blockchain protocol to fix the agreements and rules with members, other pages and communities.

- Smart contract mirrors the template contracts formally developed on legislative base in countries that have recognized document flow in blockchain;

- Signing of the smart contract occurs by each counterparty digital signature via SMS code;
- Only the User, the Page (Company) owner and the Community founder have rights for digital signature.

Page chats

To arrange the page members and subscribers communication, page chats can be created.

The following features are implemented:

- Creating a chat, it's possible to choose 1 of the 3 types: open, closed and private;
- Add/edit/delete the chat cover;
- Edit chat information and privacy status or delete it;
- Chats can be attached to the posts and displayed in the timeline;
- Entire list of page chats search and view by subscribers and guests with filtering;
- Sort chats by geo and topics;
- Opportunity to start personal dialogue with the chat member directly from the chat or add him/her to contacts.

Editor

There are two types of forms to create and send posts:

- Microblog - quick and short messages (up to 520 characters) editor with an opportunity to create multi-content posts (photos, videos, audio, links, documents);
- Blog - large, multifunctional text editor. More than 30 functions for the content formation, editing and viewing; creation of articles of up to 60,000 characters. Opportunities to create multi-content articles.

Both types of editors supports the following functions:

- Extension of the text input form in full screen;
- Opportunity to attach # tags to posts and articles.

Photo

Features to share photos and gif files with the page members and subscribers in Timeline, chats and via direct link to the blog, share photos from Instagram, Flickr и Tumblr.

Video

Features to store, view and share videos from YouTube, Vimeo, Cobe, DailyMotion with the page members and subscribers in Timeline, chats and via direct link to the blog.

Files

Opportunities to work with and store files and documents.

- Download, upload and storage files of various types: text, pdf, jpg, mp3;

- Unlimited amount of stored files;

- Visual separation of files and documents into: text, pictures, tables, graphs and tracks;

- Creating folders to sort files and documents;

- Share files and documents with subscribers and other pages in the timeline and chats;

- Share the whole folder with files;

- View and comment pdf files in a separate modal window;

- Formation and placement of posts with various types of files. Up to 10 units in one post.

Communities (Marketplace, Publicity)
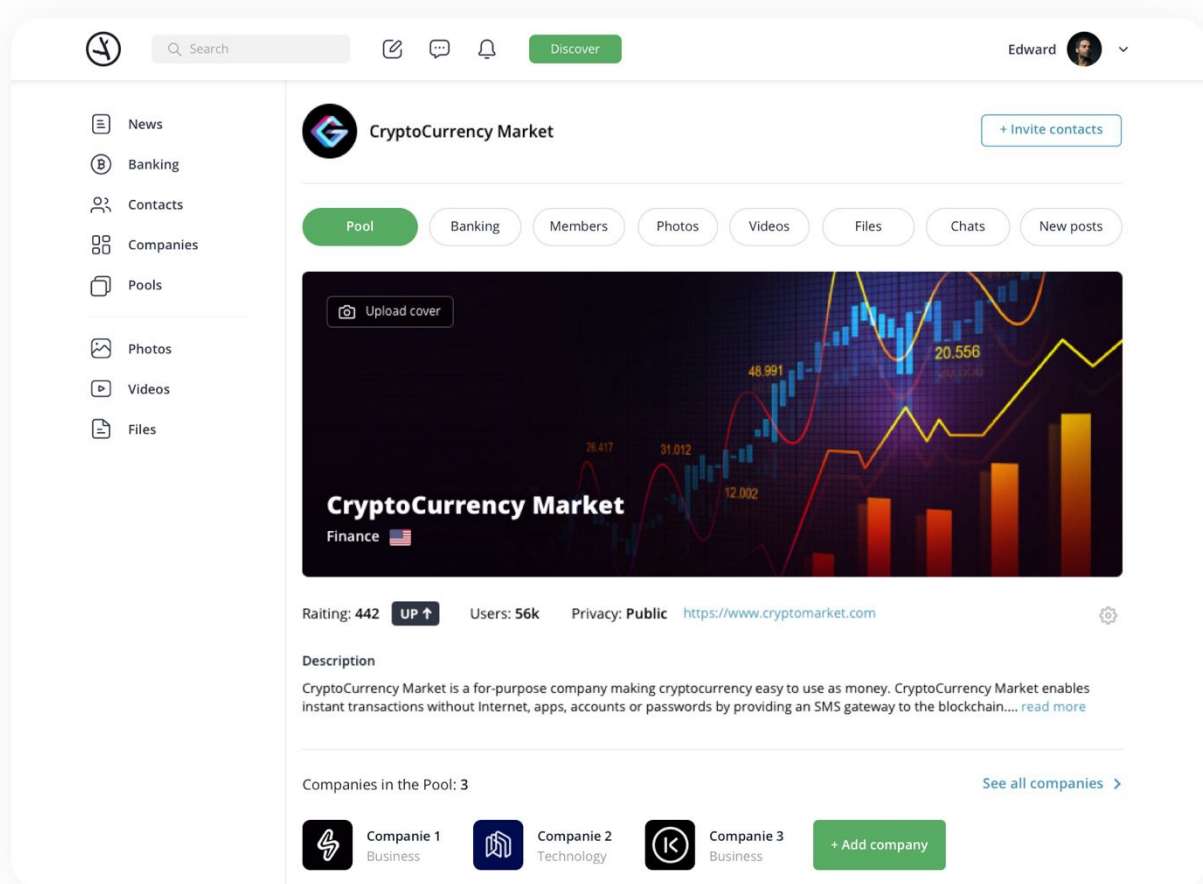
User can create an unlimited amount of communities for each profile.

Each page can join an unlimited amount of communities.

Creating a new community, user have to choose the **community type**: marketplace or publicity.

Community settings:

- Name;
- Role;
- Category;
- Privacy status;
- Description;
- Site;
- Country / City;
- Participants permission to add content to the community timeline.

Community privacy status:

- Open - visible to all users, subscription and participation is carried out without a request by any page;
- Closed - subscription and participation is carried out only upon page request.

Community basic features:

- Increase / decrease community rating;
- Display community leaders and participants;
- Community timeline;
- Quick access to community video, audio and files;
- Send invitation to the community to new users;
- Opportunity to unsubscribe from the community.;

Also, community founders can:

- Select and set community avatar and cover;
- Invite pages to join the community;
- Designate administrators from the community participants, with assignment of status and position;
- Create a new community page;
- Delete the community;
- Access to the list of blocked users.

Participants

This section contains subscribers and partners lists and management tools. Subscribers list can be filtered by the following parameters: Online / Offline, rating, geo, profession, position, age, education, gender, marital status. Implemented quick access to add new community subscribers.

Partners list can be filtered by type, category, geo, privacy status. Implemented quick access to invite new pages to join the community.

The following actions can be applied to subscribers:

- Appoint an administrator;
- Assign a role;
- Add to contacts;
- Temporary block;
- Add to the black list and delete.

The following actions can be applied to partners:

- Temporary block;
- Personally subscribe;
- Add to the black list and delete.

Banking

The following actions are implemented:

Accounts

- Create, edit and delete cryptocurrencies accounts (TWIG, Bitcoin, Etherium, BNB, USDT, BUSD, Dash, DogeCoin, EOS etc. - 20+ cryptocurrencies in total);
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Invoices

- View all community operations proceeded in Twigse banking;
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- Unlimited amount of stored files;
- Visual separation of files and documents into: text, pictures, tables, graphs and tracks;
- Creating folders to sort files and documents;
- Share files and documents with subscribers and other pages in the timeline and chats;
- Share the whole folder with files;
- View and comment pdf files in a separate modal window;
- Formation and placement of posts with various types of files. Up to 10 units in one post.

Open content

Open community content, that can be viewed by any guest without registration in Twigse platform. Simplified sharing features - the guests can send links to Twigse posts in other social networks, such as Facebook, Twitter and others.

Legal notice

The purpose of this Whitepaper is to provide information about Twigse project to potential holders of TWIG tokens. The information given herein is not exhaustive and it does not imply any contractual obligations and may be considered only as the marketing information about the project. This Whitepaper is intended to provide basic data on the project to the potential token holders based on which it will be possible to decide upon purchasing TWIG tokens.

Nothing herein may be interpreted as an investment quotation of any kind. This quotation of TWIG tokens is not an offer to sell or buy securities in any jurisdiction. This document does not offer purchasing TWIG tokens to individuals and companies that do not possess sufficient legal capability for participating in token sale.

If you are not sure that you are entitled to participate in token sale of TWIG tokens, you need to apply to a professional legal, financial, tax or other consultant.

Participation in token sale is entirely voluntary. One shall review carefully and accept the terms of the token sale agreement on the Twigse token sale project website. If you disagree with the terms partly or fully, you should not participate in token sale, and in case of your participation with further disagreement Twigse will have to decline participation in token sale and in purchasing TWIG tokens.