



White paper Narbonne  
Finance App Platform

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# 1. Introduction

Narbonne – Finance App Platform.

Narbonne - Platform for users and business. You can create app and start lending cryptocurrency in a few clicks. Build your app and work as a crypto bank or peer-to-peer lending. The company's head office will be in Switzerland.

To achieve this, we'll use our extensive experience in online microlending, peer-to-peer lending and traditional bank lending. The Narbonne team has experience in creating microlenders from scratch in Spain, Germany and Russia. Narbonne developer team created software for 40 fiat money banks and online microlenders, in our Head company – AFK (afcom.tech). There are about three million people using the software that we created.

In order to protect our investors, Narbonne will use a complicated system of initial financing for the Narbonne project. For this purpose, Narbonne will issue a token: the Narbonne Credit Coin (NCC).

The purpose of NCC is to make central banks obsolete: to become a decentralized means of payment used for lending all over the world. Narbonne Credit Coin (NCC) will be required to repay loans issued by lenders on Narbonne Platform and other financial companies. NCC is used also to pay for all services of Narbonne.

If this year, NCC will be used by most of the lending organizations dealing in cryptocurrencies. Over the next year, the demand for NCC on exchanges can outgrow its original volume by a factor of 25, which would lead to an exponential growth of its value.

The following steps will be taken to create credit support for NCC:

- 1) Narbonne issues Narbonne Credit Coin (NCC). As a result of the ICO, a proportion of the tokens (20%) will be distributed among banks and lending institutions on Narbonne platform.
- 2) These lending institutions' debtors will have to use NCC to repay the loans. Therefore, there will be demand for NCC through both existing loans and loans that will be issued in the future.

This way, Narbonne will use its profits to support and increase the network of lending institutions that provide NCC loans. Consequently, it will increase the exchange value of NCC tokens.

## 2. Narbonne technology

The important quality of a lending companies as structure is lending technology. It is a mix of mathematical statistics, probability theory and program code. All of this, in a matter of seconds, provides banks with an understanding of how to make loans, even to millions of their customers.

### 2.1. Impact of the Internet on lending

91% of Australians who wanted a mortgage got one online. Those people spent 11 to 12 hours searching for a bank that would suit them. They all obtained additional data in the same way: company websites, call centers and emails to technical support. The Internet is now so commonplace that a customer would never go to a bank to get answers to all of their questions. Up to 37% of all mortgage applications were filed online, via the Internet, and 63% of all loans were approved in the same way, online, in a few minutes. These data indicate that this is not the behavior of a few people with a specific desire for innovation, but an established behavior that's become commonplace, habitual, and that encourages more and more people to save their own time, money and energy.

Over time, new unthinkable technologies have captured people's imagination and forced the most determined to innovate. But the development of technology is accelerating. Whereas in 1991 the Internet was hardly widespread and data transmission was so slow that it would exhaust even the most determined user, by 1994, the Internet was already attaining a truly gigantic size and becoming an object of world trade, especially by the time that the dot-com bubble burst. The Internet was expanding and winning attention at breakneck speed, right up until 2006. The speed of the spread of technology has been increasing since the late 19th century. It took the phone more than 50 years to win consumers' hearts and to spread all over the world, although innovation and the necessity of this invention was unquestionable at the time. It took the Internet only 7 years to become a necessity, something natural, like

going shopping or taking a family trip to the country. It can be said that some innovations spur other innovations, accelerating the emergence of newer and more advanced technologies. Innovations now are emerging so fast that they become a part of our life almost without us noticing, because more agile companies are all trying to inspire customers to use their services. Customers' behavior is changing, and this is because new technologies are coming into our lives faster, replacing inferior ones and changing our everyday world immediately.

## 2.2. What is important in lending technology?

A bank has rather limited capabilities of taking risks, as it has to return the money to its deposit holders. Therefore, the bank must issue loans only to solvent borrowers. Banks have various tools that help them understand a borrower's solvency, such as a credit bureau, scoring models, or a default prediction model. All this allows the bank to predict the probability of a loan repayment by its future borrower, sometimes up to a hundredth of a percent, even before issuing a loan.

### 2.2.1. Our technology

The main objective of the Narbonne team is to create a decentralised large financial platform that is designed for a financial system that is being transformed. To achieve this, we'll use our extensive experience in online microlending, peer-to-peer lending and traditional bank lending. The Narbonne team has experience in creating microlenders from scratch in Spain, Germany and Russia. There are about three million people using the software that we created.

At the moment, Narbonne Platform includes the following services:

- NRCore is a scoring model that comprises 1000 scoring cards for microlending and mortgage lending.
- OLAF is an online antifraud system to track clients who fake identification data, and includes technology for registering the devices and computers that they use.
- A Proprietary Credit Bureau containing 10 million client records.

- 100% automated online lending technology. Lending Apps on Narbonne Platform could work as crypto banks or peer-to-peer lending companies without people and offices.

## 2.3. The evolution of banking

Americans held \$250 bln on prepaid debit cards in 2016. They represent a new class of consumers: those who use banking services without using banks. These people don't resort to credit cards or banking institutions, they just use money. They're difficult for traditional banks to reach but are receptive to alternative technology: lending and customer service that is conducted entirely online. For their banking needs, customers now seek simplicity, affordability and, most urgently, providers that they can trust. The average consumer today feels see no need to visit a bank, and they're absolutely justified. The Narbonne project takes account of these consumers' needs from the very beginning. Traditional banks that delay investment in new technology and fall short of customers' expectations will be left behind with no chance of catching up.

Banks have now become software and high-tech businesses, and banking operations have become a convenience that relies on this technology. On an average day, each person spends 118 minutes online, uses apps and other services up to a hundred times a day, and launches their mobile bank up to 80 times a month. This behavior has become habitual. People buy e-books and compare prices at grocery stores using a phone because, above all else, technology saves your time.

### Global Internet coverage

In 2018, the number of Internet users in the world was estimated at 3.5 bln people. Most of them, 2.5 bln, were living in developing countries; there were 1 bln in developed countries.

According to ITU data, 52% of households in the world had access to the Internet at the end of 2017 (a threefold increase from 2007). At the same time, according to ITU data, growth in the number of Internet users worldwide is slowing down and represented 6.9% in 2017 (compared to 7.4% in 2016).

### 2.3.1. The evolution of self-service

Self-service emerged at the same time as the first ATMs – they appeared in the 1970s in the US and spread across most of the world by 1980 to meet one of the most fundamental requirements of a bank – the need to provide funds to clients without them coming into an office. Today, people get 81% of their cash from ATMs. This breakthrough in customer service has enabled a huge reduction in banking costs. Automation has increased convenience for customers who now have access cash at any time of the day. The first ATMs had a very limited functionality. Even though ATMs have continued to add functionality, they're still primarily terminals to withdraw and deposit cash. Banks have introduced new features: the option for clients to check their balances, touch screens that can scan bills and approve payments, and other banking functions. ATMs have allowed banks to simplify the system for customers and reduce costs for themselves. However, the value of ATMs will diminish at the same time as fiat money. It has become normal for bank customers to transfer money using a phone number that's connected to their card, rather than with the card number itself, and customers can complete their transactions even faster when they use banking applications on their smartphones. As long as you've got the recipient's number saved in the phonebook on your smartphone, you just need to enter the amount and the transfer is done.

## **2.4.1. Remote classic banking in the world**

About 2.5 bln adults have no access to banking services. This means that about 5 bln live in households that are completely cut off from the financial system, a system that everyone else takes for granted. These people can't make deposits. They have no current accounts. They don't know a credit card is. They live in places where banks prefer not to go, and therefore they are firmly shut off from the global economy. They are called people without a bank account. But this doesn't mean they can't be reached – at least in most cases.

This is one of the most important problems that Narbonne and similar banks in the future will be able to solve.

## **2.4.2. A mobile phone as a window to a bank**

How have mobile phones changed the concept of a standard ATM? At first, banks just gave users the means to locate ATMs using their smartphones, using geolocation data to display nearby ATMs using the mobile bank app. Then, the banks got these applications to perform all the functions of an ATM, except for withdrawing and depositing cash, and now you can manage your money from the screen of your own mobile device.

## **2.4.3. Banking on portable devices**

The second stage began when mobile Internet access spread as people acquired devices like the iPhone, iPad and Samsung products. Now, customers needed to conduct all of their cash operations, except for withdrawals and deposits (which, incidentally, could now be processed entirely by an ATM), through mobile devices, which aimed for speed and ease of use. Banks had to give customers what they wanted, otherwise those people would have taken their custom elsewhere - to the non-banking services that had developed with the spread of mobile Internet technology and offered customers what they wanted. Below you can find statistical data showing that the second stage has already passed: the rate of mobile phone penetration in the US passed 100% 3 years ago, and by that time China already had more than 960 mln mobile phones and more than 500 mln mobile Internet users, which is twice as many as the US. Over the past decade, the number of mobile devices have been growing at a faster and faster rate - growth been accelerating by 25% annually. The US population sends more than 4 trln text messages a year. 99% of mobile banking users check the balance of their account, 92% of users check their recent transactions using the mobile devices. Using mobile applications, customers made transfers and bill payments worth more than \$12.5 bln, and they made more than 16 mln requests using geolocation. All these figures are for a single year, 2012, and they've been growing rapidly since. Back in 2011, there were already 32 million US residents accessing mobile banking through their devices.

## **3. Changes in the banking system today**

We're witnessing the destruction of the traditional banking system. There are four stages in the destruction, and each one represents the inevitable, fast approaching or



already completed collapse of a pillar of the banking business. After the third stage, the process will become irreversible, and it will fundamentally change the existing financial system. This destruction is caused by changes in the behavior and needs of customers globally. The first stage began when the Internet became a part of everyday life, customers started to look at services from a different angle: they realized that they now could choose the most convenient service and control the receipt and expenditure of their funds almost anywhere and at any time. Online banking got closer to the customer: 8 years ago, 48% of all money transactions were conducted at a bank branch. Today, 96% of customers use mobile banking, ATMs or call centers. The more that mobile phones and other sophisticated Internet-enabled devices penetrate our lives, the more customers change their perception of banks.

## 3.1. Equality between customers and banks

Banks could avoid taking any risks by rejecting customers that wouldn't bring big profits and rejecting customers who did not match their client models. As soon as a bank learned something about its customers that it didn't like, it could say, "Sorry, you don't suit us." This attitude developed because historically banking provide one of society's most important social functions. As social technology has penetrated faster and faster into our lives, so customer's scrutiny of banks has increased. With the advent of social networks, banks found themselves in a situation where the social community was scrutinising them and their activities as closely as the banks examined their customers. It became apparent that the relationship between banks and their customers was unequal, that customers were not fully satisfied with banking policy and that they were looking for representatives who could provide them with banking without a bank. When the image of a bank became extremely negative on social networks and the crowd considered the bank to be bad, there was no way for the bank to change people's opinions, however much it spent on marketing. The term "transparency" perfectly reflects what clients started to demand from their banks.

When banks provided the crowd with the necessary transparency, they always inspired confidence. If banks had no transparency, clients didn't trust them, because the crowd on social media said that the bank wasn't open, and therefore it wasn't honest with clients, meant it didn't deserve trust.

## 3.1. SMM and banks

1978 can be considered the beginning of the era of social networks – back then, two computer scientists Christensen and Suss invented the electronic bulletin board system BBS, which was used to exchange information, invitations to events, announcements for events, etc. The GeoCities project emerged in 1994-1999, which allowed people to set up their own websites on the Internet; America Online created an instant messaging service that had a user audience of 34 mln by 2004. Facebook was launched in 2003, when another company was at the top of the user lists, Myspace. By 2007, there were 200 mln registered users on Facebook, which was twice as many users as Myspace. In February 2008, Barack Obama passed up public funding for his election race, raising \$55 mln in 29 days through social networks instead. Twitter played its role in the political system in 2009, when people protested against the controversial victory of Mahmoud Ahmadinejad during the presidential elections in Iran. In short, it turned out that Twitter, Facebook and other social networks had a great influence on the politics of completely different countries. Users speak out, using their democratic right to freedom of speech, encouraging the crowd on social networks to follow and participate in the rallies in support of a certain idea that they've seen expressed there. 12,233 messages per second were posted on Twitter during the Super Bowl in 2012, which is not an exceptional event for the company, since their typical volume was 1 bln messages every 4 days. The consultancy Bain and Company has done research showing that social networks are an excellent marketing and sales channel, and their influence on brands has increased significantly as social networks have grown. Meanwhile, banks that use these channels to raise awareness have seen yields grow by 20% to 40%. These banks have also established an emotional connection with their customers, making social networks both a necessity and a competitive advantage for innovative banks over traditional ones. The era of online banking is unimaginable without social networks, and companies that don't realize this have already been left far behind. Citibank is one of the few banks whose customer base interacts with the bank through social networks.

### 3.1.1. Marketing through social networks

Social networks provide a lot of information to banks for market research and customer satisfaction surveys, as well as for many other vital parameters that are essential for any bank that wants to really know its customers. For example, you can learn a lot about a borrower by analysing his or her behaviour online. You can learn

a lot of things about customers that they themselves may not be aware of, from their first and last names to their preferences. If a good marketer notices the customer's need for a particular service and offers it on time, the interaction between the customer and the bank will become many times more efficient. A bank that understands how to use social networks can have a dialogue with its customers. When social networks first appeared, banks had all sorts of ideas about what to do with them – some hoped to use them as marketing channels and just apply traditional offline strategies, others didn't take them at all seriously as a way of gathering information, and they blocked their employees from wasting their time with social networks. Thus, banks neither understood nor exploited the real value that social networks could provide at every stage of their business from customer acquisition to after-sales customer support. Meanwhile, it was non-banking organizations who seized the really valuable new opportunities and provided banking services. Companies that ignore information from their customers are risking the collapse of their brands because the transparency and dialogue that today's customers demand is only possible for banks that listen to what their customers are saying about their brands.

## 4. The destruction of the traditional banking system

It seems that banks are now going through the third stage in the destruction of traditional banking. This stage is characterised by the disappearance of cash. Traditional banks are racing to build an audience of mobile customers, but without much success.

JP Morgan Chase (the world's 5th biggest bank by assets) has 24.8 mln mobile customers.

Wells Fargo (7th biggest bank) has 18 mln active mobile users.

Bank of America (11th biggest) had 20.2 mln active users of mobile banking in Q2 2016.

If we look at the online marketplaces that initially operated remotely, we'll see much higher figures.

Alibaba sets the benchmark for mobile segment reporting and performance. In August 2016, the Chinese online retailer Alibaba showed what it means to be a leader in the mobile segment, with the announcement that 427 mln of its 434 mln users are monthly active mobile users. In Q2 2016, mobile users accounted for 75% of total

amount paid for goods on the platform and 75% of profits. Here are a few facts to give an idea of Alibaba's 427 mln mobile users:

- the US population is 324 mln people;
- Walmart's global client base is 260 mln people (note: Walmart records weekly users, Alibaba records monthly users).

This is why we have designed Narbonne as an entirely remote bank that provides all the traditional services online and has no branch network.

## 4.1. Technological landmarks

Year    Landmark description

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2018    Storage systems for everyone

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2021    Robotized services

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2022    Internet of things and for things

    Portable Internet

    3D printing and customized production

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2023 Implantable technology

Big Data analysis for decision-making

Field of vision interfaces

Digital presence

Governments and blockchain

Pocket supercomputer

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2024 Distributed computing

3D printing and human health

Connected home

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2025 3D printing and consumer products

Artificial intelligence and the work of "white-collars"

P2P economy

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2026 Automatic cars

Artificial intelligence and decision-making systems

Smart cities

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2027 Blockchain economy

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That table is based on the results of a poll about the technological landmarks that people are expecting over the next decade.

More than 90% of the respondents believe that within seven years at least 10% of the world's population will have clothes connected to the Internet and unlimited free digital storage. More than 80% of respondents believe that humanity will be using implantable cell phones and machines printed on 3D printers. Although the aim of the study was a better understanding of the key technological challenges, it's more important to understand what changes will affect the banking industry, including Narbonne.

## 4.2. The impact on the financial sector

There are six key trends that will change the way people live, interact and do business.

As these changes take effect, the flow of customers to traditional banking institutions will shrink and shrink. We can see how quickly and easily a customer can switch bank using just a mobile phone.

Access to data has never before been so easy. Consumers expect their banks to know, find and reward them based on the data that they receive. More importantly, consumers expect this every day, all year round, without any days off, in real time and across all channels, including computers, smartphones and even portable devices.

According to a study by Oxford University, the introduction of artificial intelligence will allow computers to replace people in almost half of all the jobs worldwide, especially in the service sector. With Narbonne, we're therefore automating all the possible processes where humans would usually be used.

## 4.3. Six key trends

The landmarks in the poll were grouped into six separate trends.



*People and the Internet:* the way users connect to the network. Portable and implantable technology will allow people to interact with objects and each other in new ways.

*Calculations, communication and universal access to data.* Rapid reduction in the cost of data collection and analysis will cause an exponential growth in Internet connectivity. It will become possible to interact with digital technology, data and the network anywhere, anytime and on any device.

*Internet of things.* Small, cheap and "smart" sensors connected to the Internet. On the one hand, they help work, play and just live. On the other hand, they will collect a lot of information that's useful for personalizing services offered.

*Artificial intelligence and Big Data.* Ability to analyze vast amounts of disparate data and the ability of computers to learn, develop and improve decision-making results based on these data.

*P2P economy and distributed trust.* Transition to network- and platform-based social and economic models with asset sharing.

*Digitization of things.* Ability to create customized things at the user's request by 3D printing, based on the digital transmission of the thing's parameters.

## 5. Deposit Rates Protection.

Regional and single-country banks operate within one currency zone, and since they borrow and lend in the same currency they aren't affected by currency fluctuations. Narbonne Platform will work with numerous cryptocurrencies. In the first stages, it will work with Bitcoin and Ethereum. Then it will add Ripple, LiteCoin and other less popular currencies. It may therefore happen that that deposits are taken in Ethereum, and loans are issued in Bitcoin The ETH/BTC exchange rate can move by as much as 25% within a matter of days. We'll solve this problem by using technical solutions to set up partnerships with exchanges that support derivatives, such as options and futures. The Chicago Mercantile Exchange also has stated that it's ready to allow options and futures to be placed on its platform.

We are integrating with one or more of the following exchanges:

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Derbit	Deribit has ZERO trading fees and is the only full-featured Bitcoin futures and options platform. Deribit also offers trading via REST, Websockets API or FIX bridge. High-performance API that can handle even hundreds of requests per second from a single account.
Quoine	Quoine has ZERO trading fees and their Matching Engine is capable of processing close to one million transactions per second. Currency deposits in local banks covering all major global and Asian currencies: JPY, USD, EUR, SGD, HKD, IDR, PHP, AUD.
BitMex	BitMEX.com is an exchange offering derivatives products on top of Bitcoin. BitMEX is a new type of Bitcoin exchange, built for serious traders and cryptocurrency holders with liquidity and hedging needs. BitMEX is the only derivatives exchange that stands behind its settlements and will never force-close a position or deduct profits from traders to cover its losses.
SimpleFX	SimpleFX offers CFDs/derivatives on crypto currencies such as bitcoin and litecoin, forex markets, commodities, indices, and much more for Bitcoin users.
1Broker	1Broker.com also offers CFDs/derivatives on various financial markets for Bitcoin users. You can use bitcoin to go long or short on several different indices, stocks, commodities, and forex pairs.
CHX	The <b>Chicago Stock Exchange (CHX)</b> is a stock exchange in Chicago, Illinois. The exchange is a national securities exchange and Self-Regulatory Organization, which operates under the oversight of the U.S. Securities and Exchange Commission. The Chicago Board Options Exchange, hereafter CBOE, and Bitcoin exchange Gemini announced a joint agreement on Aug. 2. As part of the deal, Gemini will supply data to support the CBOE in a future listing of Bitcoin derivatives.



# 6. ICO

Our legal entity, “Narbonne”, will be incorporated in Switzerland. Switzerland is one of the most interesting countries encouraging the development of financial technologies.

Depending on the outcome of the ICO, either extra tokens will be issued or unsold tokens will be destroyed. Profits will be distributed in proportion to the number of tokens owned.

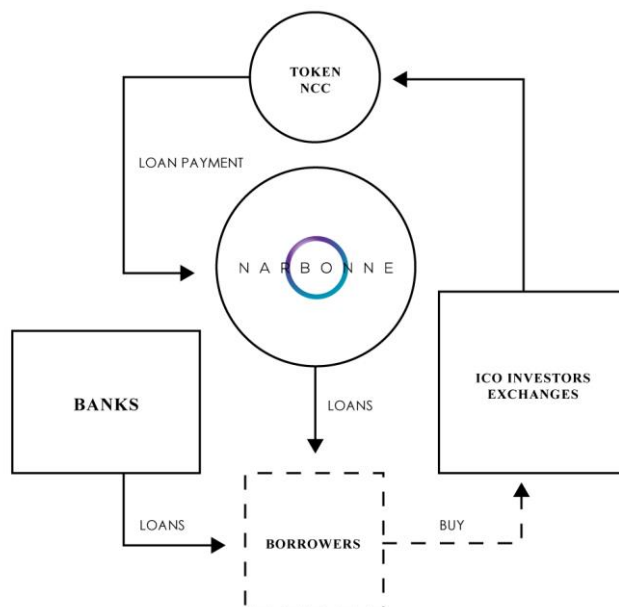
## Token: Narbonne Credit Coin (NCC)

Narbonne Credit Coin (NCC) token is a unique means of payment that holders can use to borrow and make loans repayments from lenders on Narbonne Platform. NCC is used also to pay for all services of Narbonne.

Lending institutions that accept Narbonne Credit Coin (NCC) are as follows:

- Peer-to-peer lending companies;
- Peer-to-business lending companies;
- Online microfinance companies;
- Banks and other lending institutions;

## 6.1. Token





A total of 1,000,000,000 tokens will be issue for this purpose. Based on the result of the ICO, the unsold quantity will be destroyed. Profits will be distributed to the token holders based on their share of total number of tokens issued.

1 Narbonne Credit Coin (NCC) – 0,00012 ETH

Distribution of tokens:

Users: 60%

Lending institutions: 20%

Founders&Employers: 15%

Bounty campaign: 4%

Advisers: 1%

## 7. Roadmap

May 2013	We start work on developing software for microfinance organizations.
December 2013	The first client to use our solution is a microfinance company
June 2014	We develop our own scoring solution, NRCore, which includes 1000 scoring cards
December 2014	We develop our own credit bureau with 50,000 records.
April 2015	Our pool of clients grows to 8 microfinance companies and 1 bank.
November 2015	First leasing company to implement our solution.
February 2016	We develop a pilot anti-fraud solution for GET TAXI and BLABLACAR with the partner SMDTP.
August 2016	We implement the OLAF anti-fraud solution.
January 2017	9 Mio records in our own credit bureau.
May 2017	40 finance companies and banks among our clients
June 2017	The Narbonne platform emerges as a concept.

October 2017	Smart-contract is launched
November 2017	Roadshow and marketing campaign in Europe, USA, and China, to attract platform users
February 2018	Finishing work on security systems and card solutions
July 2018	Work on developing lending AI

400 ETH	Road-show for ICO
2 600 ETH	PR Campaign to advertise the platform
4 000 ETH	Expand developer team to 50 persons
1 500 ETH	Expand management team to 12 persons
1 000 ETH	Opening local branch offices and legal entities
14 500 ETH	Purchasing a ready-made licensed payment institution with membership in SWIFT, VISA, Mastercard
1 000 ETH	Various organizational expenditures
<b>400 ETH</b>	<b>Pre-ICO Soft cap</b>
<b>5 500 ETH</b>	<b>ICO Soft cap</b>
<b>25 000 ETH</b>	<b>ICO Hard cap</b>

## 7. Narbonne across future trends

We're witnessing a complete change in the way that relationship between consumers of banking services is moving to a higher level. Banking is changing, banking as we used to know will cease to exist, it will be replaced by a crypto banks.

The new, perfect, online service on Narbonne Platform, fully automated and self-sufficient. Personnel on lenders on Narbonne Platform will be replaced by AI elements. Narbonne's purpose is to speed up the process of transferring fiat money into the crypto world. Banks will not disappear, since they satisfy one of the most important human needs, but they will change beyond recognition.

Through its speed in introducing new technology, Narbonne, like Ethereum Platform will assume leadership of the market of services for the new Era of lending institutions.

## 7.2. Narbonne comparison with other solutions.

Type	Narbonne	Ethereum	Wawes
Lending cryptocurrency	+	-	-
Mobile Banking	+	-	-
Autonomous maintenance	+	-	-
Chat bots with AI elements	+	-	-
Wallets for businesses	+	-	-
Own Credit Bureau	+	-	-
Bookkeeping at the blockchain	+	-	-
Full online service	+	+	+
Recognition of persons and sex	+	-	-
Deposits in cryptocurrencies	+	-	-
Voice control	+	-	-
Offline network	-	-	-

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