



Enterprise Blockchain
Platform

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I. Challenges.

Many companies considering blockchain technologies run into a number of problems stemming from the fact that there is no ecosystem of blockchain-based solution, and also no business solution standards. When such companies analyze blockchain technologies, they discover critical issues such as lack of possibility to manage solution update process or to replace the blockchain solution.

While integrating the blockchain solution, companies have to build the architecture from the ground up, develop and test it using their own resources. They waste a lot of time developing their own methods of solving their problems. Another, more manageable way, is to use third party solutions with an established ecosystem. For this reason, testing new solutions and launching pilot projects is costly.

Integration and technological solutions.

Generally, the incorporation of blockchain into the business technology seems complicated and expensive. Existing companies have the solutions and experience in the implementation of industrial systems or broad-use consumer products.

Some companies use solutions, which have been the standard for many years, even if those have become technologically obsolete. In some cases, the replacement of an obsolete solution results in more expenses than those associated the current inefficiency. Most solutions pass the stages of early use to enable creation of an ecosystem around them.

Lopsided evolution of blockchain solutions.

We see an unsolved problem preventing the distribution of blockchain technologies on a large scale. The ecosystem of blockchain-based applied business solutions has not been shaped yet. Blockchain technologies actively evolve towards quick and simple payment solutions. The features of blockchain technologies, which can be used to solve other business challenges, are uncovered at a much slower rate.

Some technologies, which would improve business operations already today and could replace solutions with obsolete architecture, cannot be created using blockchain. The core reason for that is the absence of earlier solutions applied blockchain solutions will be based on, which are yet to be developed.

Demand outpaces supply.

The demand for applied blockchain-based solutions is growing faster than the supply of ready-to-use solutions or developer teams businesses might be interested in. This situation is similar to that of many breakthrough technologies in the period of active growth. The evolution of blockchain technologies in the domain of financial transactions decreases interest and attention from the developers that the companies need.



The logical evolution of blockchain technology distribution rates is directed towards the accelerated creation of a broad and accessible developer competence market after a decline in the earlier unsatisfied interest.

1. Capabilities of blockchain technologies.

Many blockchain-based solutions are only understood by people with a technical background, who can gain hands-on development experience in the blockchain technology ecosystem, which is being shaped. The company may have competences and a deep understanding of how to use digital technologies, but this does not guarantee successful application of blockchain technologies. Due to the complexity and the process of blockchain implementation in segmented domains, employees with broad competences are much less confident in making decisions regarding the implementation of this or that blockchain technology to act on the already existing company directives.

Competitive advantage.

Companies working on highly competitive markets can gain a competitive advantage. Established market niches with a scale of businesses operating in them generally use well-known opportunities to engage in economic activity.

The use of solutions based on Narbonne's blockchain technology reduces barriers to gaining competitive advantage. Narbonne blockchain is designed to be able to skip one or several complicated stages both during implementation in the company and in the course of scaling up and employees' adjustment to the new technology. Due to its modular structure, the decisions on using the blockchain technology can be made taking into account the "cost" of relevant implementation outcomes and the feasibility of solution use by various company structures. For small companies, Narbonne proposes to use pre-made optimized Twoclickstartup modules. Some Twoclickstartup modules enable small companies to extend the levers of business opportunities immediately after the implementation.

Modular architecture.

Modular architecture with tags informing of solution use opportunities will help in-house developers to shorten the stage of blockchain technology selection and training required to make decisions regarding the possible use of blockchain technologies, granting an opportunity to proceed directly to design to be able to act on the company's business objectives.

Unlocking the potential.

Narbonne blockchain unveils the company's potential in various domains from financial transactions and audit to creation of cloud-based data registers gathering information from IoT devices on a commercial scale.

II. Industries.

1. Banks and financial institutions.

When banks start interacting with each other, they often experience multiple issues related to the incompatibility of their systems and solutions. These systems took decades to build, they can be based on outdated technology and architecture with no possibility of optimization, and replacing such systems is too expensive and too complicated to be feasible. Some systems used by banks date all the way back to the '70s¹.

System interoperability.

Most of the time such legacy systems are refurbished using temporary solutions, and the improvement process turns into an endless search for new ways to patch up vulnerabilities, causing nothing but delays. Banks hire whole teams of developers with narrow skill sets, effectively turning into technology companies. As a consequence, banking systems introduced in developing countries years later than in developed countries have better architecture from the start. The costs of their maintenance and further development are therefore lower by a factor of several dozen.

It can take years to negotiate and test the software integration of two banks. The SWIFT system, developed over 40 years ago³, is a well-proven but outdated, obsolete standard. Its inefficiency becomes a trap for the banks using it.

Common banking standard.

The blockchain technologies solve both the problem of cross-bank interaction and the issues of outdated architecture. Blockchain applications in banking are an example of a solution delivering long-term advantages for the new banks when the architecture is built around it.

2. Cross-border asset movement.

Moving assets and cooperating with foreign suppliers creates problems on both ends. Most of these problems pertain to the financial realm. While completing transactions within the banking ecosystems, companies choose stable transitional assets, such as US dollar.

Standard of interoperability.

There are no standardized well-functioning solutions like SWIFT for the accounting of physical assets. Many companies fail to solve this problem on their own. Scaling of such operations creates the need for new business units including people from logistics, legal, and linguistics departments in order to track changes throughout the phases of asset movement.

A problem with no solution.

For the last 25 years, every attempt to reduce the losses caused by this issue has failed. These losses amount to up to 30% of the GDP in some countries².

The blockchain technologies solve both issues in a decentralized way, offering a long-awaited, logical solution.

3. Expenditures for transactions, audit and monitoring.

Depending on the industry and technological needs of the businesses, the field of blockchain application expands every day. This is promoted by digitalization of business processes as well as the awareness of the paradigm of a space where standard-setting, implementation of an interactive environment, and control can be achieved instantly, with precision and security.

Inventing opportunities.

Making future-oriented technologies a standard will pave the way for a number of industries that could not have emerged otherwise. Steam engine, internal combustion engine, radio, the internet—each of these technologies changed the economy of its time in a fundamental way. Each became the foundation for a new industry. Blockchain is one of such technologies.

III. Why need Narbonne Blockchain?

Industry standard.

Narbonne must set a standard for a wide range of blockchain technologies. Using these techs solves a host of pressing issues and satisfies a number of business needs. Every company can find certain advantages for its business. The blockchain platform is a standard in itself, and it enables any additional application to integrate with it using a standardized set of operators.

A core for future platforms.

In the longer term, the Narbonne blockchain can be used by financial institutions and businesses to build the core of a proprietary technology platform. The Narbonne blockchain is a powerful and flexible solution in itself.

The Narbonne blockchain is ready for fast targeted adaptation to existing business solutions, without the need to interrupt the operations.

Stable currency and liquidity.



We see most pressing challenge for the existing cryptocurrencies in high volatility⁴ of cryptocurrencies that makes the their exchange rate move sharply sideways and renders it extremely difficult to do any kind of price forecasting. Consequently, no business can today entrust its chain of payments to cryptocurrencies in its every link, as cryptocurrencies may fluctuate dozens of per cent per day. The profit rate of 70% of companies is below 1% per month (meaning, less than 12% per year)⁵, with an average margin of about 5% per unit of goods or services sold, respectively.

With cryptocurrencies exchange rate fluctuating beyond the businesses' margin levels, using any cryptocurrency has no economic sense whatsoever. At present, given the necessity to exchange US dollars in course of business processes, settlements in cryptocurrencies take from a week to few months to be completed. During this period, the cryptocurrency which was the initial base of the transaction, may gain or lose its value hundreds-fold. That will largely exceed the profit level expected by the business from the transaction itself. Narbonne Coin is there to resolve this issue.

Ensuring liquidity.

In order to ensure the stability of Narbonne blockchain, we use a cross-chain that can be directly linked to blockchains based on stable assets such as USD or gold, e.g. DigixDAO⁶, Tether⁷, Goldmint⁸. Third-party blockchains can provide high level of liquidity⁹ enabling even large businesses to convert funds into USD or other final or transitional assets without difficulty.

1. Specifics Narbonne Blockchain.

A. Very high transaction speed.

A possibility to redistribute the sidechain's¹⁰ workload enables high scalability and paralleling blockchains that helps to increase the speed multi-fold.

B. Confidentiality.

The transaction can be effected in a confidential or in an open regime. We will strive to get the confidential transactions regime in line with various countries' legislation on confidentiality, such as banking secrecy law, and at the same time, get an open transaction mode accepted as a juridical evidence of the transaction.

C. Protocol "0".

Standardized modules of widely spread technologies with blockchain technologies enable quick extraction or addition of technological modules.

D. Industry standards.

Developers will use common and familiar programming languages and standard architecture. This will simplify training and eliminate the need to have a holistic and deep understanding of the solution model.



E. Private blockchains.

Narbonne enables creation of completely private blockchains to leverage blockchain opportunities in no-disclosure or restricted data use situations. In such cases, Narbonne blockchain can be rolled out in a private mode. Usage of a private blockchain network ensures data confidentiality.

F. Blockchain replacement.

To eliminate the risk of using limited functions of becoming technologically obsolete, Narbonne blockchain will be able to connect to, and fully interact with other blockchains via cross-chain. This will enable quick interchangeability and augmentability of technologies without the need to replace the core blockchain solution.

G. Smart Contract.

Supporting decentralized and centralized applications or Smart Contract in order to perform Narbonne blockchain transactions.

H. Cross-chain.

Cross-chain provides an option to create connections between separate blockchains and perform cross-network asset transactions. This is also a solution to connect several private blockchains to each other or to other public blockchains. Cross-chain enables seamless transactions, thus eliminating the need for multilevel settlement and payment systems.

2. Ecosystem.

Narbonne's infrastructure already includes solutions suitable for a large number of traditional businesses in finance and other sectors. Narbonne blockchain possesses the utmost advantages that will be helpful for users in the future, namely, high transactions speed, protection, possibility to perform anonymous transactions.

The principles of Narbonne solution ecosystem:

Ready to use.

The solutions implemented by Narbonne are designed leveraging actual user experience. They function based on the purpose of a specific solution with interfaces to shorten the period of training for potential users. The principle of interfaces – getting the expected outcome from the program in a few clicks.

Modular structure.

Modular structure enables transition from widely spread technologies to blockchain and vice versa.



Simplicity.

The “toothbrush”¹¹ rule: we create our systems so easy to use that they can be used on a daily basis. Systems and solutions infrastructure that we create on the base of our blockchain technology should enable users to use our solutions without even thinking of how they work.

API EMB1.

The Narbonne API enables the blockchain’s integration with any centralized or decentralized solutions, complementing these with smart contracts and transactional solutions.

API EMC1.

Narbonne API offers all capabilities of modular solutions that can be employed as a core or an interface to the technologies depending on blockchain. Supporting highly efficient and scalable solutions using API with an open integrated architecture.

Infrastructure Languages for the Narbonne blockchain solutions.

These are the solutions with preset support (partial and full) of the following languages: C++, PHP, Java, Pascal, HTML, Oracle. The number of supported languages will increase following requests received from the community.

Dynamic prices.

Narbonne blockchain solutions support dynamic prices linkable either to the stable Narbonne Coin or other cryptocurrencies that the business plans to transact in.

Solutions supporting AML legislation, banking secrecy law, and providing juridical evidence of transactions.

Narbonne blockchain infrastructure solutions are in line with the principal laws regulating everyday business activity, and their applicability as a juridical evidence or for complying with requirements of various regulating bodies.

TwoClickStartup.

The companies that plan to create a new business that supports blockchain technologies may use solutions of Narbonne blockchain infrastructure in order to launch a fully automated business in a few mouse clicks. The principle underlying these solutions is to transfer offline business processes online, and to replace processes that involve human participation with bot-operated algorithms and elements of AI.

IV. Roadmap

May 2013	We start work on developing software for microfinance organizations.
November 2015	First leasing company to implement our solution.
May 2017	40 finance companies and banks among our clients
June 2017	The Narbonne platform emerges as a concept.
January 2018	Cryptobank solution created.
Q1 2018	Roadshow and marketing campaign.
Marth 2018	Launch API Enterprise EMC1.
Q2 2018	Launch Twoclickstartup v.1.
Q3 2018	Launch API Ecosystem EMB1.

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