

# BYELEX NV THE NEXT INNOVATION COMPANY

**Building innovative technologies  
for business 3.0 companies**

**The Byelex Investment Memorandum  
Whitepaper December 1, 2017**



# CONFIDENTIALITY

This confidential White paper or outline (the “Document”) is based on information provided by Byelex Multimedia Products , a Dutch company, its management, shareholders and other sources deemed reliable. Byelex Multimedia Products BV has compiled this document for the purpose of evaluating a possible financing, strategic partnership or other transaction involving Byelex Multimedia Products BV, hereinafter called Byelex. Acceptance of delivery of this document by a recipient constitutes acceptance of the terms and conditions set out in this disclaimer.

The sole purpose of this document is to inform the recipient about the ideas and directions that Byelex has regarding a possible ICO to attract investments via the crypto market.

This document has not been registered or approved in any jurisdiction. Neither this document nor its contents may be distributed or disclosed to the public and no potential transaction referred to herein may be affected to the public.

Neither this document nor any other information, prospectus, form of application, advertisement or other document or information regarding the subject may be disclosed, distributed or published to another party without the written consent of Byelex.

Under no circumstances should the recipient of this document make contact with shareholders, employees, customers, and suppliers of Byelex without prior written consent from Byelex. Any communication or inquiries concerning this document or any need for further information concerning the process or this document should be referred exclusively to:

**Byelex Multimedia Products BV**  
**Attn. Mr. Herman Vissia**  
**[Herman.vissia@byelex.com](mailto:Herman.vissia@byelex.com)**  
**Argon 1**  
**4751XC Oud Gastel**  
**The Netherlands**

# TABLE OF CONTENTS

<b>1. EXECUTIVE SUMMARY</b> .....	<b>4</b>
1.1 Decades of leading technologies	4
1.2 The software innovation market today	5
1.3 Opportunity	5
1.4 Business Model	6
1.5 Target Audience	6
<b>2. THE COMPANY</b> .....	<b>8</b>
2.1 History	8
2.2 The Leadership Team	8
2.3 The “ring of trust” of the Next Innovation Company	9
2.4 The Advisory team	9
<b>3. KEY TECHNOLOGIES</b> .....	<b>11</b>
3.1 Key Technologies	11
3.1.1 LOCATION AWARENESS, MOBILE & CLOUD TECHNOLOGY	12
3.1.2 ARTIFICIAL INTELLIGENCE & PATTERN RECOGNITION	12
3.1.3 CRYPTOGRAPHY	12
3.2 Technology in detail	13
3.2.1 General software technologies	13
3.2.2 Portal technologies	13
3.2.3 Artificial Intelligence	14
3.2.4 Pattern recognition	14
3.2.5 Secure data logistics	15
3.2.6 Natural Language Processing	15
3.2.7 Mobile access, location awareness and authentication	16
3.2.8 Planning & scheduling	16
3.2.9 Big Data handling	16
3.2.10 Crypto Currencies & Blockchain technologies	17
<b>4. BYESHARES</b> .....	<b>18</b>
4.1 How to determine the value of Byelex	18
4.1.1. We have tokenized our shares of the company	18
4.1.2 Financial breakdown and valuation methodology	19
4.1.3. Token distribution and value	20
4.2 Getting BYESHARES	21
4.3 Budget Allocation	21
4.4 Timeline	22

# 1.1 DECADES OF LEADING TECHNOLOGIES

Since 1994 Byelex staff consists of world leading subject matter experts, academics, and technologists to provide practical, thorough, and insightful technologies that can be applied in a variety of industries across the globe. The research performed by Byelex over the last 10 years covers three major technology areas with various important subgroups. Byelex research provides cutting edge expertise at the intersection of business processes and innovative technological solutions. The technologies developed address relevant issues for financial services, regulators, banks (regional and global), financial market intermediaries, airports, occupational health organizations, telecom companies, universities, production companies, transportation services, and many other firms across the world.

### GOAL

This whitepaper offers an overview of our expertise and our products. It also outlines the need for investment, and the approach we take to monetize on more than 10 years of dedicated research.

### EXPERTISE & PRODUCTS

Byelex developed successful products in these three important fields of technology:

- Location awareness, mobile & cloud technology
- Artificial intelligence & Pattern recognition
- Cryptography

### AT YOUR DISPOSAL, VIA BYELEX YOU OWN AND APPLY:

- World Top most secure encryption technology
- Most advanced natural language processing system
- Most impressive pattern recognition platform for videos
- Most successful occupational health system

### MONTHLY NEW HIGHLIGHTS, THANKS TO:

- Outstanding 40+ specialist development team
- Co-development with more than 20 specialized departments at Minks University/ Belarus State University, dept. Applied Mathematics and Information Technologies
- Constantly upgraded best practices in Byelex impressive list of customers.

### SOLID INVESTMENT

Byelex products have been successfully implemented in many organizations. However, the global potential of these products exceeds the actual revenues. In order to market this expansion Byelex is looking to involve customers, suppliers, and personnel in developing great technologies and products by offering them shares in the company without the hassle and costs associated with traditional company funding. For this reason, Byelex is going to tokenize the company shares in such a way that anyone with an Ethereum wallet can buy and sell Byelex company shares, and also benefit from future successes and profits made by Byelex. Token holders can attend shareholder meetings, and have voting rights. Token distribution is secured by a set of smart contracts and the bylaws of Byelex are public, and will be published on Github. The Token sale is done via an ICO (Initial Coin Offering), and will comply with the rules as set by the Dutch Governmental organization AFM (Authority Financial Markets) and the ACM, (Authority Consumer and Markets)

## 1.2 THE SOFTWARE INNOVATION MARKET TODAY

### MORE EFFECTIVE INVESTMENT

On average, 2% of the total turnover of companies and governments can be considered AS investments in Innovation. Most of this budget is used for internal labor cost, and ongoing product or service improvement. Only a very small percentage is used for truly innovative projects; on average not more than 0.5% of the total turnover. Considering these figures, and knowing that a lot of software projects fail, it is understandable that most companies are reluctant to invest in new innovations dealing directly with software.

### MORE INVOLVED PARTNERS

Most software suppliers are not technology developers, but rather “body movers”, and we know them as System Integrators. They are not willing to take a risk when developing new software as they do not invest in the new technologies themselves. They are only willing to subcontract projects by outsourcing, and implementing off-the-shelf solutions rather than helping the customer in selecting the best solution for their needs, or co-invest with the customer in true innovative technologies.

## 1.3 OPPORTUNITY

### HIGHER REWARDS

With the new Next Innovation Laboratory Solution, Byelex provides participating organizations with a modern, highly streamlined alternative for their internal ‘high risk - potentially high reward’ projects.

### BETTER SOLUTIONS

Byelex is well positioned to help customers explore the latest insights on technologies like Artificial Intelligence, Mobile, and Security from its offices in Oud Gastel, High-tech Campus at the High-tech Park Minsk and Eindhoven. Byelex offers an environment that will be beneficial to almost every IT innovation project in a variety of industries. Byelex will have a multi-revenue model, ensuring that the laboratory component within Byelex can work independently, performing ground breaking academic research, still make a profit applying insights specific to a customer’s situation, and keep the independent position needed to give solid advice and develop the best possible solution for a customer.



## 1.4 BUSINESS MODEL

### PARTICIPATING ASSOCIATE

The existing set of products like BuzzCovery and StorGrid are market ready and will be sold in the market via direct sales. Existing bespoke SaaS systems like the Occupational Health Systems will generate revenue for at least three more years and will continue to contribute to the turnover of Byelex. Because of the innovative way organizations and private persons can obtain shares of Byelex (via a crypto exchange), we will offer large organizations the possibility to obtain shares in the equity of Byelex, making them a shareholder and therefore a part of the success of Byelex.

### MORE INVOLVED PARTNERS

When an organization purchases more than an equivalent of 50.000 Euros of equity in Byelex, they are entitled to become a Research Associate. Becoming a Research Associate will bring lots of benefits to these organizations:

- direct access to the latest technologies and insights developed by the various R&D teams within Byelex via workshops and technology podcasts, and
- opportunity to issue a “real life” problem which would be discussed and assessed by the core R&D teams, and
- a yearly visit to one of the research centers in Holland or Belarus to meet the scientists in person.
- entrance of two free special events with unique content and top speakers

As the Byelex Research

Associates community grows, the transaction volumes will increase leading to new products and services owned by Byelex (like BuzzCovery, Picopoint). A Research Associate can choose to become a customer of Byelex, but it is not obligatory.

## 1.5 TARGET AUDIENCE

For the Research Associate, Byelex targets CTO's, CEO's and developers, and R&D managers who are struggling to make the next step in securing their market share within the existing financial boundary's. For each product and technology offered, detailed market plans will be created. The plans will include the specific target audience, promotion strategy, and associated costs for advertising, marketing and sales.

# MISSION STATEMENT

## BYELEX, THE NEXT INNOVATION COMPANY

Increases the innovation power of organizations by letting them participate in the Byelex LAB ©, where top technicians formulate appropriate answers to dedicated challenges, business cases, wishes or focus areas based on continuous scientific orientation, state of the art software technologies, scientifically validated insights and proven cases.

## WHICH OF THESE TERM SOUND FAMILIAR?

Blockchain	Smart contracts	Crypto commerce
Supervised learning	Artificial intelligence	Pattern recognition
Big data analysis	Dedicated search engines	Cloud storage
Security	Encryption	Portal development

## CHALLENGE?

You have probably seen all of them in the tsunami of info that you encounter every day. More important: where do you find time and resources to study all implications for your daily operations? Very few organizations have sufficient time and knowledge to study all developments. Still, you do not want to miss any important developments. Being the best is what counts and IT is leading.

## SOLUTION!

Participate in Byelex LAB© and turn your challenge around. You only decide the area of interest and the desired solutions and experts in Byelex LAB© assure that you are fully up to date regarding the world-wide IT-revolution.

## INNOVATION AS A SERVICE: BYELEX LAB©

Due to the immense speed of technological development it is near impossible for companies to keep track, stay up to date and make the right decisions. Yet, your enterprise requires constant innovation. Innovation-as-a-Service (INAAS) guarantees easy access to relevant developments without investing heavily in research. Byelex LAB© supports your innovation and R&D. Smart cooperative research offers huge advantages: growth of efficiency, reduction of costs and deduction of risks. Flexibility and decision making power for new opportunities.

## BYELEX LAB©

- Monitors IT-developments based on mutually defined parameters;
- Present relevant technological development as soon as they develop;
- Investigates possibilities, consequences and roadmaps for implementation;
- Creates tailor-made solutions

### 2.1 HISTORY

ByeleX was founded in 1994. Byelex is an acronym for Byelorussian Experts, as the foundation was always the strong cooperation with the State University in Minsk. Byelex operates from two offices in the Netherlands, located in Oud Gastel, and, as from January 2018, on the High-tech Campus in Eindhoven. Our office in Minsk is situated in the science area of Minsk. We employ 48 specialists: 23 in Minsk 25 in Netherlands.

The center point of the organization lies in Minsk, Belarus. It is the place where Herman Vissia got his Ph.D. at the State University of Minsk, and where the strong connection is with the faculty of Applied Mathematics and Informatics. The brightest minds of this faculty are allowed to do their internship at Byelex, and eventually obtain a permanent position. They bring a scientific and fresh approach to the problems that Byelex typically solves. Per year, in Holland, on average, only approximately 23 students are graduating of this level. As Byelex Minsk is also appointed “commercial laboratory” by the faculty, options for further expanding the teams are present and realistic.

Over the years, Byelex published more than 30 scientific papers together with the Faculty of Applied Mathematics & Informatics on topics like Artificial intelligence, pattern recognition, encryption, and big data. Byelex Minsk is a member of the High-tech Park, and

acts as a laboratory for the Faculty. Every year more than 15 students complete assignments in advanced programming with the help of our senior staff. In the last two decades, Byelex was entrusted with many high-end, and highly visible projects, both for domestic and international clients. Byelex has extensive experience with very large software systems, facilitating millions of transactions, mainly in healthcare, telecom and finance. Based on its experience and vast technical knowledge, Byelex has always been able to create autonomous growth whilst securing the long-term continuity of their respective customers. Now the time has come for global expansion.

## 2.2 THE LEADERSHIP TEAM

### **HERMAN VISSIA, FOUNDER & CEO**

Herman Vissia is the Founder and CEO of Byelex. He works with the various departments and scientists from the Belarusian State University Minsk (BSU), and is a member of the High-tech Park in Minsk. In 2012, Vissia became the first westerner completing his Ph.D. thesis at the BSU named, 'Models, Algorithms and the technology for decision making intellectualization based on subject collections'. He was the first who could defend his thesis in the English language. To make this happen, the laws in Belarus had to be adjusted. Vissia is pioneering technology for the Semantic Web, is performing research in the field of cryptography, and gives lectures on cryptocurrencies and Blockchain technology.

### **EDWIN VAN DER HOOFT COO**

Edwin has been working for Byelex almost 18 years now. He started out as a Quality Consultant, taking on the EQS product. In this capacity he successfully implemented large scale Quality Documentation systems for a variety of Multinationals. He managed numerous software projects, and since 2010 manages the full operation at Byelex. He became a shareholder at Byelex in 2008.

### **TOSHIO SPOOR, CTO BYELEX**

Toshio joined Byelex as early as 1999. He is passionate about security, Linux, and complex networks. He managed large-scale software development projects, from building, to deployment, and to maintenance. He is the security expert when it comes to networks, hosting, and cloud environments. Toshio became a shareholder at Byelex in 2013.

### **<CANNOT BE DISCLOSED> CCO**

X has a significant and successful track record in sales and development at various financial institutions. He is a strong believer of the connected world and understand what this can bring to and with partners. In his latest position he was MT member and responsible for development and strategic alliances at the leading Payment Service Provider in the Netherlands.

### **ANTON ZALESKY, CEO BYELEX MINSK**

Anton joined Byelex as early as 1997. He is an extremely good communicator and a people's manager, as well as one of the most talented programmers you can find. Anton is an inspirer and mentor for our young developers, and the Byelex partnership in Minsk. He has run the Minsk branch as CEO since 2015.

### **SERGEI GAFUROV, CTO BYELEX MINSK**

Sergei joined Byelex in 1998. He is one of the most all-round specialists we have in Byelex, and is the technical know-it-all/ask-to-be-sure for most of the developers and project consultants. He is an expert in Artificial Intelligence, Big Data, and programming technology in general. He is the CTO at Byelex Minsk since 2015.

### 2.3 THE “RING OF TRUST” OF THE NEXT INNOVATION COMPANY

In addition to the core team, Byelex has assembled a group of entrepreneurs and experts with a distinctive track record in order to make the next step in the development of the organization. Byelex had the guts to invest large amounts of time and money in emerging technologies, purely from a scientific and technological perspective. In the next phase Byelex wants to start capitalizing on these

investments by connecting the developed solutions to real business cases where innovation is paramount. In order to make this step Byelex is currently approaching a new CCO and other Commercial and Financial experts. The names will be released upon request.

### 2.4 THE ADVISORY TEAM

In addition to the core team and the ring of trust, Byelex worked intensively together with our Notaries, lawyers and accountants, in this respect, most important were the following two people:

**Mr. E.P.B. ten Brinke (Eric) Notary at Ligne Netwerk Notaries The Netherlands**

Eric is an all-round notary with more than 14 years of experience in all areas of modern Notary business in the Netherlands. He graduated Cum Laude from Nijmegen University in Dutch Law.

**P. Knobel (Piet) Accountant & Business consultant at Accountantskantoor Knobel (AA)(FB) (FFP)**

Piet has more than 25 years of experience in the accountancy world. He served and is serving numerous medium and large organizations in the field of accountancy, business development and company valuation. Piet is the trusted advisor for Byelex for almost 20 years, so he knows the company and its management very well, and was therefore able to precisely assess the financial paragraphs in this whitepaper.

# OFFICES

## **BYELEX COMBINES THE BEST OF BOTH WORLDS. OUR OFFICES ARE LOCATED AT TWO OF THE WORLD'S SMARTEST REGIONS.**

- High Tech Campus in Eindhoven, Netherlands where development and vivid entrepreneurship are the key drivers for business. This location is supported by our well-equipped Dutch development lab near Rotterdam.
- High Tech Park at the University of Minsk, where our most talented mathematicians and programmers are constantly renewing and applying the latest IT developments.

### **HIGH TECH PARK, MINSK BELARUS**

What makes High Tech Park unique in the world is the overwhelming mix of high quality technical education, highly skilled IT professionals and government support for IT industry. According to World Bank: Belarus aims to be in top-20 for new business countries in 2020! A realistic aim: Belarus is growing from 63th 2014, 50th in 2015 to 37th in 2017; turnover more than EUR 1.000.000.000. Over 100.000 smart people available in Belarus, 30.000 of them work in High Tech Park, 50% under 30 years old: Byelex offices in Minsk employ the best. No wonder over 50% of the world top-10 companies have business interests in Belarus.

### **HIGH TECH CAMPUS, EINDHOVEN NETHERLANDS**

An inspiring combination of research under one roof. With the presence of technical global players like Philips, ASML, NXP, FEI Company, DAF, VDL and TomTom, the Eindhoven Brainport region has always been the location to build and accelerate a high-tech start-up or scale-up. The magic of High Tech Campus Eindhoven is simple; the people.

Accelerate your business by achieving faster, better and more customer-oriented innovation.

- 150 Campus companies (Philips, NXP, IBM, Intel)
- international networks
- Over 10.000 smart people.

ByeleX is not a new company. We have been in business since 1994 and have proven to be a trustworthy, highly skilled partner for many (international) customers. Together with clients as well as on our own account we have developed important and solid high tech products and solutions. Byelex does not only promise success; we have proven our skills for more than two decades. Vision: Use proven and scientific technology to help companies in their Next Innovation endeavors. We enter an era in which cooperation is central. We believe in the Next Innovation Company, for a number of important reasons:

### **1. THE PARTICIPATION MODEL IS BASED ON THE IDEA THAT YOU WILL HAVE ACCESS TO A SMART TECHNOLOGICAL BACKBONE, DEPLOYED FOR INNOVATION THROUGH SHARED LEADERSHIP.**

ByeleX believes in the participation model. Technology must fit in with the needs and wishes of today and tomorrow. Since nobody can keep track of everything, collaboration is the only smart solution. Participation. We want to play an important role in the subscription economy with the combination of smart technology and market vision. BaaS (Business As A Service). Today's "share" economy wants services instead of products. Byelex is the technological backbone for this; Byelex is adding a front end to this, which ensures that technology works as an accelerator in the development of concepts and business models in the Business as a Service Economy; Byelex is the driving force behind future innovations.

### **2. PARTICIPATION IN A LAB / DEVELOPMENT IDEA.**

The essence of this idea is that in the new world, when you're involved with your own technological backbone, you, as an organization, are continuously fed with the latest developments in various core technologies which are continuously challenging the current backbone of your organization. In addition to financially attractive participation, we combine the ICO with a foundation of LAB. That means that we believe that you also have to share the LAB function.

### **3. LAUNCHING SUCCESSFUL PRODUCTS**

One of the important commercial spearheads is that the Next Innovation Company will continue to market successful product launches in white labeled and commercial products and services, which are in line with the above. These also serve as a first introduction to the services of Byelex.

## 3.1 KEY TECHNOLOGIES

ByeleX has an almost 23 year history of developing technologies, methodologies, and solutions in various fields like Artificial Intelligence, Data Logistics, Planning Algorithms, Encryption based technologies like Attribute Based Encryption and Blockchain, Natural Language Processing, and mobile access and authentication systems. We have an almost unlimited access to the R&D facilities at BSU (Belarus State University). All of the technologies that are covered by the teams of ByeleX, are innovative, unique, and based on these technologies, it is possible to create solutions for a very wide spectrum of economic activities.

The technologies below are not only of great value to important large customers and thus proof of the level of the organization, but are also of great importance to organizations that are transforming to the new economy of sharing and participation. Many of the technologies are pillars of this new reality and they make it possible to accelerate the transformation of product driven organization models into service driven organization models. This too is the focal point in the transition from ByeleX to the Next Innovation Company, where ByeleX already lends a kind of "Intel Inside"-assurance to these transformations. We can supervise these processes intensively through the associates we have collaborating to us and from a model that we have developed for large companies in the transition to the new economy. In short: not only are the already developed technologies groundbreaking and very stable for large companies, they are also the means to accelerate new business models for the future.

### 3.1.1 LOCATION AWARENESS, MOBILE & CLOUD TECHNOLOGY

Existing customers using our technologies belonging to this category are ZIGGO, IKEA, Blokker, Bart Smit, De Persgroep, and Cisco. From this category two spin-offs are already realized, Event Touch, and Picopoint.

### 3.1.2 ARTIFICIAL INTELLIGENCE & PATTERN RECOGNITION

Within this category we can determine various sub-categories like Decision Support Systems, Natural Language Processing technologies, Deep Learning, Supervised Learning and Pattern Recognition. Typical customers using these technologies are: North Scotland Water, ArboNed, Leo Kanner Institute, Heineken, and De Persgroep. Products developed within this category are BuzzCoverly, Publizz, EQS, and Logo Detection.

## 3.2 TECHNOLOGY IN DETAIL

This section will give insight into the technologies developed or currently under development. We will present the various technologies together with hyperlinks to websites, scientific articles, and Wikipedia posts together with real business cases.

## 3.2.1 GENERAL SOFTWARE TECHNOLOGIES

### THEORETICAL

ByeleX integrates software to materialize business solutions. So it is good to know

### APPROACH

know what kind of software is used within Byelex to build the proposed solutions. We have to describe the “toolkit” and the skillset that we require from our scientists and programmers. For us, the type of programming language is not so important.

### APPLICATION

We have some products where we had to program in 5 different languages, like C# Java, Node.JS, C++ and JavaScript. But we have a preference for Java. It is simply the most mature programming language to develop large scale solutions. There are plenty of “spin-offs” like Python, but in essence, Java is the core competence within Byelex. For databases, we have a preference for Oracle, but other open source databases like MongoDB, MySQL and PostgreSQL do not have any mysteries to us. We love to work based on Web services and API's for integration, and we strongly believe in standards in this field, as this enhances operability between components. We have an extensive experience in Lotus Notes, and we won various prizes for our solutions like EQS (Electronic Quality System), still running at some large organizations, like Heineken and North Scotland Water up until this date. We run from 3 different datacenters, where we have systems running on Solaris, Linux and even Windows. We use machines from NetApp for Backup and Oracle & Dell for our VM's or Bare Metal servers. Network technology comes from Cisco and HP.

### EXAMPLES

EQS  
StorGrid  
Numerous other solutions

## 3.2.2 PORTAL TECHNOLOGIES

<b>THEORETICAL</b>	Almost all the research work that we do at Byelex results in some sort of Portal
<b>APPROACH</b>	where one can manage the customers, the data and/or payments.
<b>APPLICATION</b>	Because we have developed so many of those portals, we now have an extensive library with components that we can use to quickly deploy a new portal. Typical library components are user registration and verification modules, Interface modules made in Bootstrap, PDF, WORD, EXCEL export routines, Dashboard templates for representing data, and many more “ready to use” modules.
<b>EXAMPLES</b>	Examples of these portals are RiVER, and innovative Insurance handling portal, “Tempus Scriptor”, a time registration management portal for medical specialists, RankYourPins, a portal for the determination of best choices based on pictures, Eventtouch, an event management portal solution, handling hundreds of events per year for various multinationals and state organizations.

## 3.2.3 ARTIFICIAL INTELLIGENCE

<b>THEORETICAL</b>	As early innovation adaptor, Byelex started development in the area of AI as early
<b>APPROACH</b>	as 1994. The first application was an expert system that diagnoses a patient’s physical complaints, based on the input of a family doctor. Byelex techies have published more than 10 scientific papers, all towards the innovative way of implementing fuzzy logic into the Knowledge designer that we have built for this project. The Outcome was a multi-purpose “knowledge designer” that can be used in various fields where expert knowledge is needed. We have built experts systems for failure diagnosis on complex technical systems, mortgage expertise, an online family doctor, an online career advisor, an online test for the selection of an education for indecisive kids, an online washing machine advisor, an online career advisor, etc.
<b>APPLICATION</b>	We believe that this @dvisor technology is perfect for automation of service portals where customers have to make choices based on expert knowledge, and where there is always an amount of uncertainty. All scientists and developers involved in this technology are still with the company, so no knowledge is lost up until this moment.
<b>EXAMPLES</b>	Expertise center for Autism in Holland, where @dvisor is use to detect autism in young children by means of an interactive questionnaire. This system “Heeftmijnkindautisme.nl” is already running for 6 years, and has given thousands of advices to worried parents, in 3 different languages.

## 3.2.4 PATTERN RECOGNITION

**THEORETICAL APPROACH** At Byelex, we have a dedicated team doing research in the field of Pattern recognition in images. More specifically, in detecting logos in videos. By means of supervised learning we train the algorithms to detect various logos in videos.

**APPLICATION** We believe that this @dvisor technology is perfect for automation of service portals where customers have to make choices based on expert knowledge, and where there is always an amount of uncertainty. All scientists and developers involved in this technology are still with the company, so no knowledge is lost up until this moment.

**EXAMPLES** Expertise center for Autism in Holland, where @dvisor is used to detect autism in young children by means of an interactive questionnaire. This system "Heeftmijnkindautisme.nl" is already running for 6 years, and has given thousands of advices to worried parents, in 3 different languages.

## 3.2.5 SECURE DATA LOGISTICS

**THEORETICAL APPROACH** Secure Data Logistics, or SDL technology consists of various technologies, mostly developed in-house at Byelex. One of the core concepts is the protection of mobile devices against data theft

**APPLICATION** Various scientific articles have been written, and a full product has been developed by our team. This allows huge data logistics within a corporate environment, totally secure, without having the problem of massive encryption/ decryption activities.

**EXAMPLES** One of the most novel things we have done is the successful implementation of Attribute Based Encryption (ABE) in the Storgrid System.

## 3.2.6 NATURAL LANGUAGE PROCESSING

### APPLICATION

ByeleX is performing research, and is building applications for more than 8 years

### APPROACH

in the field of Natural Language Processing, more specifically in the field of Named Entity Recognition (NER).

### APPLICATION

We have developed the technology OpenDover, where we can detect sentiments and mood states in news and blog items. We can also detect a variety of specialized entities, like NACE code detection (To which economic activity does this article belong?) (150 different economic activities can be detected), Event detection (what events or topics are discussed in the article?) (36 different event and topic groups can be detected) Domain detection (what knowledge domain does the article belong to?) (28 domains can be detected). We can detect a long list of various entity types like 25 different organization types, person names, technology terms, Industry terms, medical terms, etc.

### EXAMPLES

The technology is implemented in successful in-house applications like BuzzCoverly, a semantic search engine, BuzzTalk, a big data research tool for PR & Marketing, and Publizz, a Content curation tool allowing companies to compile Electronic Magazines for their stakeholders like customers, shareholders, suppliers and personnel.

## 3.2.7 MOBILE ACCESS, LOCATION AWARENESS AND AUTHENTICATION

**THEORETICAL APPROACH** At Byelex we perform quite some research in the field of authentication and registration, especially on mobile devices, more specifically Wi-Fi. We do this via our daughter company called Picopoint.

**APPLICATION** We have developed various API's and offerings to allow network operators and telco's to utilize their existing WiFi networks, and to give them the tools to develop innovative new ways of using these networks.

**EXAMPLES** Most of the research results in this area are directly implemented in the Picopoint technology stack.

## 3.2.8 PLANNING & SCHEDULING

**THEORETICAL APPROACH** We have developed a technology for the planning of medical examinations. The planning and scheduling technology is based on the theory of Sweep Algorithms in Computational Geometry, quite a new application for this kind of math, and completely developed by our scientists in Minsk.

**APPLICATION** The functioning of the planning system can be represented as processing of permanently incoming requests (orders) for medical examinations via manual input by medical staff and via a web page by candidates themselves. For these medical examinations the following limited resources are involved:

- working time of specialists,
- Availability (office hours) of examination rooms,
- Availability intervals of equipment.

-Every specialist has a list of roles he/she can play, depending on the roles planning is performed

**EXAMPLES** The planning system is implemented at one of the largest occupational health organizations in The Netherlands, called ArboNed.

## 3.2.9 BIG DATA HANDLING

**THEORETICAL** For various projects we had to familiarize with technologies dedicated to

**APPROACH** handling of large amounts of unstructured data like text or videos.

**APPLICATION** Next to the use of standard solutions like Casandra cluster technology or Lustre file system technology, we have developed special technologies to utilize these standard technologies into our own solutions. Implementation of these technologies can be found in solutions like BuzzCovery, where a user can search an amount of more than 700 million publications, including more than 10 billion tags, with a response time less than 1 second. We used Casandra cluster technology for this, together with Lucene and our own modified search accelerator software. Another example is Logodetection, where we have to process between 100 and 250 hours of video per day, making them instantly available for a large audience. The Portal that we developed makes use of Lustre Technology, predominately used in super computers for fast processing and retrieval of large files.

**EXAMPLES** BuzzCovery  
Logodetection

## 3.2.10 CRYPTO CURRENCIES & BLOCKCHAIN TECHNOLOGIES

**THEORETICAL** Since 2013 Byelex is involved in this new and exciting area of Blockchain

**APPROACH** technology. We have built Crypto miners, we have built special portals for the management of distributed mining systems, we have investigated the inner works of Blockchain technologies, we have experimented with Solidity, the Script language for developing smart contracts on the Ethereum Blockchain

**APPLICATION** We are operating a few Bitcoin ATM's in The Netherlands, one of them is situated on the High Tech Campus in Eindhoven. We give lectures on the implications of Blockchain technologies, and we are actively promoting the further research in this direction at the Belarus State University, in order to train new students in the use of this technology in various fields other than FinTech.

**EXAMPLES** Smart contracts for Medical, Notary, Insurance



# 4.1 HOW TO DETERMINE THE VALUE OF BYELEX

As stated in other parts of this document, Byelex has been focusing on developing core technologies for the last seven years. So it is important to know how much effort is incorporated in Byelex at this moment.

In 2009, we have started with our Natural Language Processing Technology, which took six years to complete all the basics, and make it ready for mass implementation. Until 01-10-2017 we have invested more than 85.000 development hours to complete the technology including the creation of BuzzTalk, BuzzCoverly, and Publizz; products that are using this core technology.

In 2013, we began developing our encryption technology based on Attribute Based Encryption. This resulted in the creation of a product called StorGrid. To date approximately 60.000 development hours has been spent on this particular technology. Through two subsidiaries, named Byelex Sales BV, and Byelex Data Solutions BV,

investment has been done by various parties. In October 2017, all assets of both entities were purchased by Byelex, mostly by paying the investors in equity of Byelex Solutions BV, the company that operates under the name of Picopoint.

During the last five years, the focus was on the development of various technologies, rather than the marketing of these technologies. This is the reason for the flat growth rates during this period. As from now Byelex is able to penetrate the market with tested high value products. Since October 2017, all most important technologies were back in the hands of Byelex, and a start can be made to prepare selling these technologies; starting with the marketing of BuzzCoverly.

# 4.1 HOW TO DETERMINE THE VALUE OF BYELEX

The BYESHARES token is not only a digital crypto code for a coin that has to prove its value in the future: every BYESHARE represents a real part of the 23 year old company with promising perspectives.

The underlying asset is a share of the company. Each share entitles the owner to receive dividends and to attend the annual shareholders meetings. Byelex has chosen the Ethereum Blockchain to issue ERC20 tokens. As Byelex is limited by Dutch law to sell no more than an equivalent of 2.5 million Euros worth of tokens, and with respect to the valuation described in the next chapter, a total of 148.500.000 will be brought into circulation. 13.2% of these tokens are issued

to the public with the intention to accumulate 2.5 million Euros for further development of the company, as explained in chapter 4 of this document. 1.7% of the tokens will be used to reward personnel and the other tokens are already in possession of the existing shareholders of Byelex

# TABLE OF 4.1.2 FINANCIAL BREAKDOWN AND VALUATION METHODOLOGY CONTENTS

	Development hours spent to 01-10-2017	Total hours investment	Equity %	SaaS turnover per year	Total value SaaS (when sold)	Total Value of company
Value BuzzTalk	90000	4.050.000,00				
Value StorGrid	40000	1.800.000,00				
Value Encryption	10000	450.000,00				
Value ArboNed				800.000,00	4.050.000,00	
Value shares Picopoint			32%			4.800.000,00
Value Logo detection			50%			250.000,00
Value Bitcoin ATM				150.000,00	250.000,00	
		6.300.000,00			4.250.000,00	5.675.000,00
<b>GRAND TOTAL</b>						<b>16.225.000,00</b>

\*All other mentioned technologies in this document are valued at ZERO, as we cannot guarantee successful market introduction. However, we feel that it can be easily valued at 1.5 million or more.



**“We have been developing smart software solutions for more than 20 years”**

*We deliver our work with a team of highly qualified developers in several proven technologies such as Java, Oracle and Drupal*

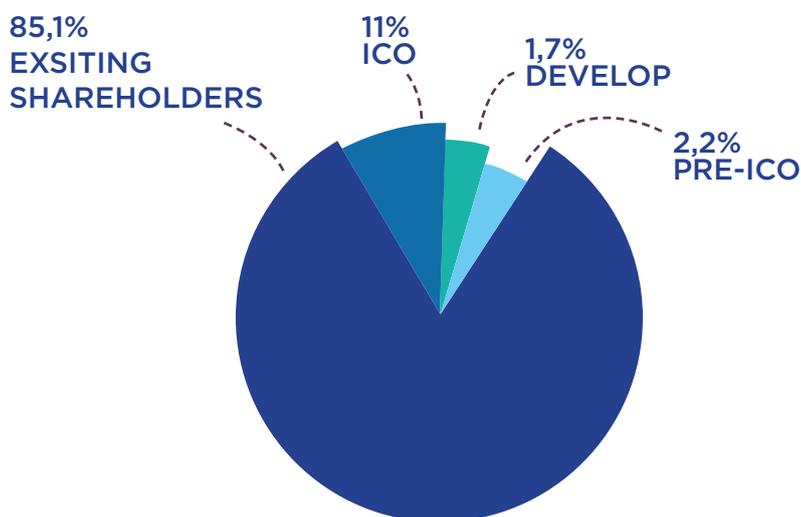
## 4.1.3. TOKEN DISTRIBUTION AND VALUE

### TOKEN DISTRIBUTION

Initially, tokens are distributed based on the number of shares that existing shareholders have in Byelex NV. This entity generates 750.000.000 shares as authorized capital stock. A maximum of 7% of all tokens can be put on the market by Byelex each year, limiting dilution for the shareholders. Ownership of BYESHARES carries numerous rights, as stated in the Bylaws (Deed of Incorporation) of Byelex NV, and can be verified via this GitHub link.

### TOTAL TOKEN DISTRIBUTION BASED ON THE ISSUED CAPITAL STOCK

Total authorised capital stock = 750,000,000 Tokens  
 Total issued capital stock = 148.500.000 Tokens  
 Maximum dilution per annum: 7%  
 (Bound by smart contract)



### TOKEN VALUE

The deducted value of one token has been determined to be EUR 0,13 (13 Eurocents), resulting in a total valuation of the company at EUR 19.305.000,00.

### EXISTING SHAREHOLDERS



Max supply of shares	750.000.000 BYESHARES
Total value of Byelex	148.500.000 BYESHARES
Reserved for existing shareholders	126.373.500 BYESHARES
Issued during pre-ICO	2,2 % = 3.267.000 BYESHARES
Issued during ICO	11 % = 16.335.000 BYESHARES

### PRE-ICO

In the pre-ICO only investors invited by the management of Byelex can participate. The minimum value of investment during the pre-ICO is EUR 2.500,00. A bonus scheme is applicable for all pre-ICO participants (30% discount); the pre-ICO price will be EUR 0.09 (9 Eurocents) per token. Effectively pre-ICO investors receive 27.473 tokens for every EUR 2.500,00. Tokens can also be paid via EURO or Ethers or Bitcoins during the pre-ICO, calculated by actual value. The value of a token in Ethers or Bitcoins depends on the price of the Ether or Bitcoin at the time of purchase.

## PRE-ICO

In the pre-ICO only investors invited by the management of Byelex can participate. The minimum value of investment during the pre-ICO is EUR 2.500,00. A bonus scheme is applicable for all pre-ICO participants (30% discount); the pre-ICO price will be EUR 0.09 (9 Eurocents) per token. Effectively pre-ICO investors receive 27.473 tokens for every EUR 2.500,00. Tokens can also be paid via EURO or Ethers or Bitcoins during the pre-ICO, calculated by actual value. The value of a token in Ethers or Bitcoins depends on the price of the Ether or Bitcoin at the time of purchase

## ICO

During the ICO everybody can participate. There will not be a minimum investment. A bonus scheme is applicable for all ICO participants (15% discount); the ICO price will be EUR 0,11 (11 Eurocents) per token. Tokens can only be paid via Ethers or Bitcoins during the ICO, calculated by actual value. The value of a token in Ethers or Bitcoins depends on the price of the Ether or Bitcoin at the time of purchase.

Pre-ICO > 3.267.000 BYESHARES at price of EUR 0,09

ICO > 16.335.000 BYESHARES at price of EUR 0,11

# 4.2 GETTING BYESHARES

BYESHARES will be issued during our crowd sale or ICO. The sale will last six weeks from the 14th February 2018 to 15th March 2018. BYESHARES can be bought via a secured crowd sale platform that as stated on the official website for this token - [www.byeshares.com](http://www.byeshares.com). BYESHARES will be sold using MyEtherWallet.

# 4.3 BUDGET ALLOCATION

The funding raised through the ICO will be used to accelerate sales of the online platform BuzzCoverly; the creation of a full fledged Marketing and Sales organization. Pending on the success of the ICO, the distribution of funds will mainly go towards marketing, advertising, and key hires such as senior sales representatives, marketing professionals, and project managers.

Some of the roles we plan to hire (either permanent or as consultants):

- Chief Commercial Officer (1)
- Project Managers (2)
- Marketing manager (1)
- Sales representatives (2)
- Marketing and PR specialists (2)

Compliance and Legal 10% - A share of the funds will be set aside for legal and compliance in order to establish the business.

Business Development 10% - The business development budget will allow to raise awareness of our platform within the insurance sector.

Reserve 10% - A portion of the funds will be set aside for any future unforeseen costs.

## 4.4 TIMELINE

### Q4 - 2017:

- R&D - Research into blockchain technology, and smart contracts for particular cases
- Preparing for the pre-ICO and collecting the first investments

### Q2 - 2018:

- Distribute BYX Tokens to Crowd sale participants
- Scale the organization - Ensure that the whole organization can scale up

### Q1 - 2018:

- ICO - Collecting 2.3 million investment from the ICO
- Go to market - Establish a sales and support organization

### Q3 - 2018:

- Raise awareness of Byelex new proposed projects
- Make Byelex dashboard and BYX wallet available