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# INTRODUCTION

At PATHEARN we develop Artificial Intelligence (AI) based solutions for insurance, retail, sales force automation, smart cities, production, transport, infrastructure and resource planning, environment, healthcare, marketing and advertising, automotive, tourism and recreation.

Our target is to facilitate the creation of the world's richest distributed geolocation database that will fuel the statistical and AI based algorithms in order to transform the Earth to a better place for living (pathearn.ai).

PATHEARN is a blockchain based solution for Vehicles, IoT devices and multiple moving and stationary objects location data gathering and distribution ecosystem.

# MISSION

PATHEARN empowers individuals all over the globe to monetize their surroundings by sharing the data they harvest using the power of blockchain micro-payments.

People are tired of being exploited and giving away their data for free. They want a way to own the data they collect and exchange that for a fair value. The mission of PATHEARN is to enable that exchange through a distributed, decentralized and permissionless network. PATHEARN is available to all and benefits all based on the value they provide to the ecosystem.

We are focused on creating the world's largest distributed database of vehicle, IoT devices, people and multiple objects location data, leveraging GPS technology, wired and wireless technologies for recognition, classification and ranking of movable objects.

To unfold the full potential of such database, we are developing Artificial Intelligence (AI) technologies to achieve state-of-the-art data processing, recommendation, prediction and data analytics solutions.

# TOKENOMICS

## PATHEARN Token (PTRN)

A strict limit of 300 000 000 PTRN tokens will be created, never to be increased. PTRN will run natively on the Polygon(POS) blockchain network as ERC 20 token and will have 18 decimals. Half of the PTRN tokens will be minted initially while the other half will be reserved for minting by the data harvesting operators and applications.

PTRN has properties and use cases designed to two functions:

**Store of Value:** Being backed by data, PTRN has guaranteed minimum value which is not likely to deflate sharply and will be stable even in volatile markets.

**Medium of Exchange:** PTRN will be used to facilitate the sale, purchase, and exchange of data on the PATHEARN platform.

## PATHEARN Token Value

The PATHEARN token will be backed by the data stored on the PATHEARN platform while a demand for such data exists. New PATHEARN tokens will be minted by data harvesting (data miners) and added to the PATHEARN economy. Owners of PATHEARN tokens can list them on any exchange supporting the ERC-20 standard. Users looking to buy data will need to have purchased PTRN from an exchange in order to fetch data from the PATHEARN platform. Thus, a significant continued demand for the PTRN token will be created without artificial

market making. Supply and demand for data stored inside PATHEARN are the two fundamental forces that set the intrinsic value of the PTRN token. Investors and market speculators will create nonfunctional demand for PTRN which will increase the net award value for the data miners and thus boost the further development of the project.

### PTRN Pricing Mechanism

Historical Data and Real-time Data are the two asset types that form the net value of PATHEARN. The PTRN minting difficulty is automatically adjusted based on the number of minters on the network and the demand created by data consumers. The higher the demand, the higher the rewards, and vice versa. The mining difficulty will be additionally increased for a set of minters who submit overlapping data or are flagged for exploiting the system. The starting mining difficulty will be based on the amount of PTRN tokens purchased by the initial consumers.

Some important PTRN price fundamentals are Data Demand, Data Supply, PTRN Mining Difficulty, Passive PTRN Investors (holders), Market Speculators, and Third-Party Application Developers.

### PTRN Interoperability

PTRN miners will be able to withdraw PTRN tokens at prespecified periods of time by triggering a smart contract function from the PATHEARN Platform. PTRN tokens could be withdrawn on multiple blockchain networks that support EVM, such as Polygon, Avalanche, Fantom, as well as layer-2 solutions as Optimism, zkSync, Arbitrium.

#### 50% Minting Reserve

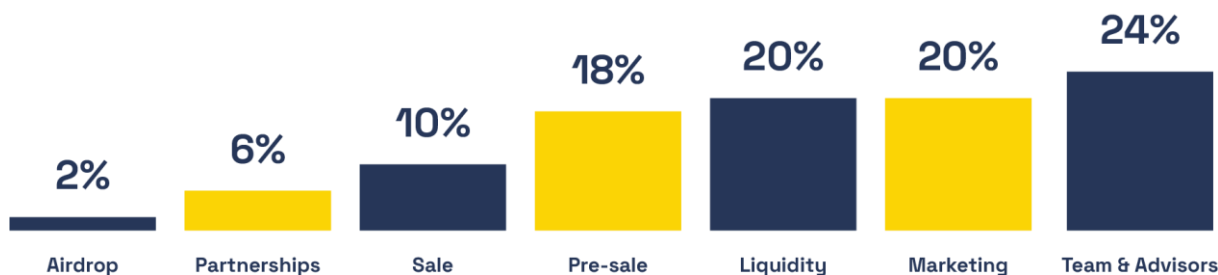


Total supply of PATHEARN Tokens  
will be 300 000 000 with 18 decimals

Allocation	Share	Tokens
Minting Reserve	50	150,000,000.00
Project development	50	150,000,000.00

#### 50% Project development

### Token Distribution



Allocation	Tokens	%	Lock-Up Period
Pre-sale	27,000,000.00	18	24-36 months schedule
Sale	15,000,000.00	10	24-36 months schedule
Liquidity	30,000,000.00	20	

Marketing	30,000,000.00	20	
Team & Advisors	36,000,000.00	24	24-36 months schedule
Partnerships	9,000,000.00	6	
Airdrop	3,000,000.00	2	

## Centralized Exchanges Listings

PATHEARN users leverage the network to earn PTRN tokens. PTRN tokens can be redeemed at any time to the user's wallet.

Multiple exploit prevention mechanisms have been implemented in the system - area zoning to reduce awards for repeatable data, filter fraudulent data and such block addresses, multiple confirmations on single data listing.

# PATHEARN CONCEPT

## Ecosystem

With PATHEARN the incentive for all solution users worldwide to provide data is the immediate provisioning of rewards in crypto PTRN tokens. In general, there will be no significant efforts necessary for the users in order to be rewarded but to use the PATHEARN app while moving around, driving, playing games or utilizing the already established for other purposes or particularly for PATHEARN streaming content from stationary cameras, social networks and Internet. With PATHEARN reward algorithms it will be easy and safe to collect fair rewards for verified and proven location data content. On the other hand, the value of the collected data is instantly backed in the PATHEARN ecosystem through participants that are interested in volume location data purchasers (e.g. Insurance companies, AI modeling solution developers, marketing agencies, transport infrastructure developers, retailers etc.). The global demand for data and especially location data is generally unlimited. Many business segments are more and more dependent on reliable forecasts and predictions. Even now predictions are based on historical statistics, data science and data engineering that require enormous amount of live and historical data. For example, the training of a decent AI ML (Machine Learning) based insurance risk prediction model requires millions or even billions of actual statistical data records collected over 5 to 10 years in the past but also actual real time data in order to be able to predict risk, based on genuine current conditions. Marketing industry, sales and trade predictions, road and city infrastructure planning and many others are the business segments that already consume large amounts of location data and are ready to pay for the value of processed data, structured and certified statistical data or sophisticated and reliable forecasts and predictions. With the constant current demand for data and data based services the initial value of the generated PTRN tokens would be almost instantly available at the PATHEARN location data marketplace. With the advancing of adoption of the PATHEARN solutions the value of the PTRN token is expected to increase as the demand is expected to grow exponentially. PATHEARN reward protocols may be easily adopted from any member of the PATHEARN ecosystem and other independent service providers or external location data related services users. PTRN crypto currency would also be easily adoptable as payment method for multiple traditional or automated payment scenarios.

PATHEARN ecosystem (blockchain, location data distributed database, location data marketplace, data collection solutions) would significantly reduce the setup and maintenance of high-cost resources and efforts (which include marketing, staff training, call centers and technology support) of the conventional GPS data collectors, data providers and data users by providing proven and verifiable smart contracting platform for data and value exchange.

## Data Collection

PTRN is designed as a natural utility token. Any user may earn PTRN rewards by capturing location data with the PATHEARN mobile app while driving or moving around and as so contributing to data collection. Such users may contribute with data about other vehicles situated or driven around, in front, behind or even moving in opposite directions, parked etc. Captured data attributes may optionally include registration, time stamp, location, vehicle type, vehicle brand, vehicle color, weather conditions, day/night light conditions, drivers' behavior evaluation characteristics, and general telemetric data (direction and speed). Collected data attributes may depend on and will be in compliance with each relevant jurisdiction's legal and regulatory framework.

## Games

Gaming is additional location data source in the PATHEARN app. It has an important role in our user-acquisition strategy and will also boost users' motivation to earn more points. We give our users the opportunity to collect more points not only by capturing location data, but also while playing and having fun.

There will be a variety of game types with the option to choose between single and multi-player version. No points will be lost, even in case of a loss in a game, so playing within the PATHEARN app will only have a positive benefit for our users.

Games will be based on the collection principle, for example collecting number sequences, regional registrations, pattern hand type of numbers, VIP numbers, etc.

We plan to expand PATHEARN app games catalogue with additional games that will be included in the future releases of the app.

## IT

AI ML models are generally developed using actual events historical data plus real time data. Such solutions may acquire data through PTRN tokens and accept PTRN tokens as payment method for second and third level analytics and predictive service solutions developed based on the purchased data.

## Blockchain Ecosystem

Secure, safe and fair blockchain based smart contracting ecosystem with a native currency, distributed database and marketplace for certified data will be the sustainable foundation enabling multiple business scenarios and stakeholders to coordinate interactions and exchange value with benefits for all participants.



Registered demand for AI services and data at the data marketplace generates automated request order for PTRN generation.

## WHY BLOCKCHAIN

### Vision

PATHEARN concept is planned as transparent, trustful and allowing smooth and fair value generation and exchange blockchain based ecosystem. Adoption of blockchain provides the technological and financial means to support the ecosystem – collection tools, location database, location data marketplace and higher value sophisticated service solutions. It also facilitates value exchange and smart contract based payments between the ecosystem members through the native PTRN utility token.

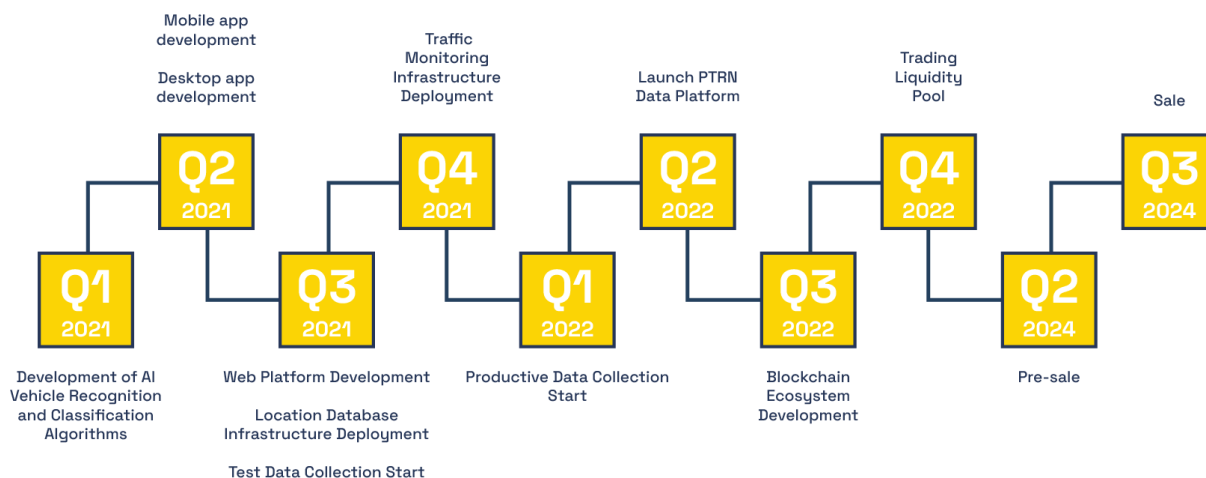
### Fraud Prevention

Unparalleled security is one of the biggest advantages that blockchain technology provides. Blockchain secures the rewards platform against hackers by using cryptographic encryption. This way the risk is being reduced of fraud and assures companies that their rewards program cannot be exploited. It also promotes customers' trust in the system and increases the likelihood that they will enroll and participate.

### Full Ownership & Transferability

Revolutionary ability for complete ownership and transferability of reward points / tokens is one of the unique aspects that blockchain technology permits. Blockchain handing over token ownership to the customer also allows complete transferability of tokens between members.

## TIMELINE



## EXECUTIVE SUMMARY

There are about 1.446 billion vehicles (including trucks) on Earth in 2021. Most of the cars in the world are located in Asia followed by Europe and North America ([1] Hedges Company (2021)). It is expected the number of vehicles on the road to triple till year 2050 ([2] Fuel Freedom Foundation (2021)). With the expected growth of population of up to 10 billion till 2050 and the continuous increase in the number of moving smart and IoT devices including transport manned and unmanned vehicles, new challenges occur for environment protection, infrastructure planning, risks assessment, tourism, smart traffic management, etc. This dynamically changing environment has a huge impact on different market segments like the insurance market where analytics play a major role. Analytic tool are challenged to provide more complex and flexible business model to insure better services. Following this trend the global insurance analytics market size was valued at USD 7.91 billion in 2019, and is projected to reach USD 22.45 billion by 2027, growing at a CAGR of 14.2% from 2020 to 2027 ([3] Allied Market Research (2021)). Recently there is a huge demand of technical solutions to support geospatial analytics resulted in rapidly increasing usage of technologies like Artificial Intelligence (AI) and Machine Learning (ML) based GIS and big data. This is another key factor for driving certain markets to record steady revenue growth like for example the Geospatial Analytics Market expected to reach USD 134.23 Billion and register a revenue CAGR of 12.1% during the forecast period, according to latest analysis by Emergen Research ([4] Emergen Research (2021)). Another market that is expected to expand at a rapid pace is the global foot traffic and customer location intelligence solution market, forecasted to reach USD 6 Bn in 2019. This is the result of the rising deployment of data analytic systems in the retail industry boosted by the large number of business stores and the increased focus on customer behavior and customer preferences ([5] Transparency Market Research (2019)). The growing demand for automotive analytics is driven by the recent focus of the automotive companies to the development of autonomous mobility. In this regard, Vehicle Analytics Market Size [2022-2028] is Expected to Reach USD 10.65 Billion, Exhibiting a CAGR of 24.06% ([6] Fortune Business Insights (2022)). There are already multiple technologies developed and implemented in order to meet the future challenges. Still evaluation, prediction and forecasts models rely on enormous both real-time and historical location data. The available nowadays location history data is either limited, fragmented and restricted in volume or lacks some very important key parameters. We believe PATHEARN will disrupt the global GPS and location data business by becoming the world's location data hub.



With the development of the information society, data has become the oil of the 21st century. Unfortunately, due to the centralized nature of the web so far, a small number of large corporations own and monetize the majority of user data. These dominant centralized corporate entities have enabled the free gathering and distribution of user-generated data at a planetary scale. All value created and accrued by the users has been captured by the large networks with little to no value shared back with the users who originated said data. The end result is massive gains for shareholders while end-users are being treated and exploited as a product.

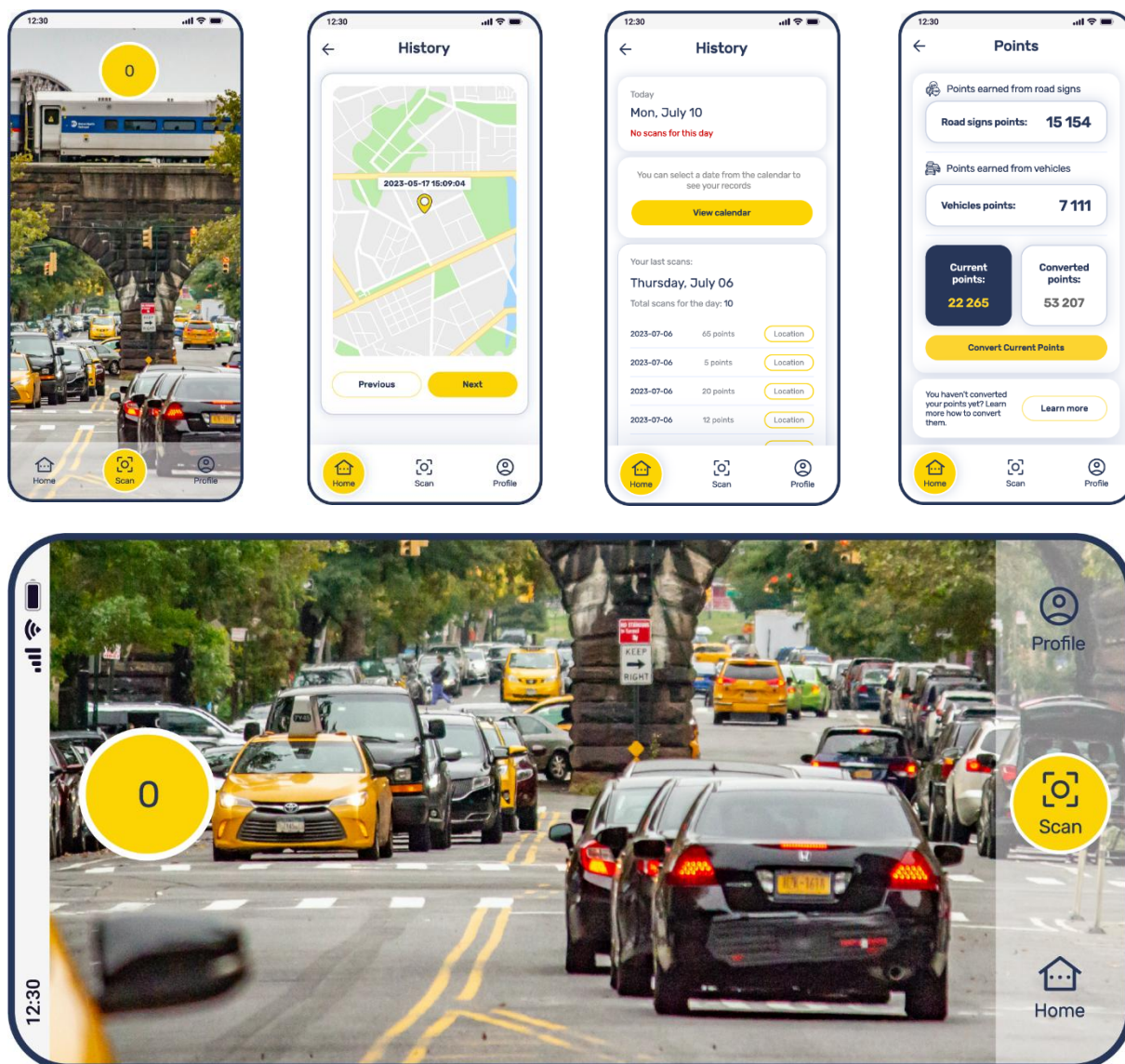
At the same time, there has been a fundamental shift in society as to how humans treat work and value exchange. Platforms such as Uber, Upwork, Fiverr, etc. have revolutionized the labor market. The number of free-lance and part-time “gig workers” has skyrocketed in recent years. More and more people are working multiple kinds of gigs trying to enable a diversified set of income streams for themselves. These gig workers are used to being self-reliant and are less and less willing to do work for free. The public’s eyes are opening to the fact that data and attention intrinsically hold value and thus should not be given away for free to the centralized corporations.

PATHEARN is a blockchain based data ecosystem providing the necessary tools and infrastructure to any location data contributor in the world (including businesses and private persons) for benefitting from location data capturing, transforming data into value and easy and safe transfer of value of the generated location data.

PATHEARN Solution Components:



PATHEARN allows various usage of large data (both local and global) for the purposes of avoidance of traffic incidents, mapping and routing, road and infrastructure planning, environment protection, better insurance risk assessment and risk prediction, targeted advertising, sales force automation, smart city traffic and parking space management, consumer behavior analysis, sales forecasts and retail facilities positioning. By utilizing PATHEARN’s team expertise in TELCO, wireless technologies, geo positioning and geo location technologies, AI technologies, data analytics and telemetric data implication for applications in insurance and retail, PATHEARN provides multiple tools for data contribution and rewards in crypto tokens for the solution users who would generally earn crypto by capturing certain objects in the surrounding environment. Using PATHEARN’s mobile app (for Android and iOS) or PATHEARN’s application for streaming platforms and cameras (for MS Windows OS) any single user, SME or corporate business may mine crypto tokens by capturing or verifying geolocation of surrounding vehicles, people or devices. PTRN is planned as utility token that derives value from location data and provides multiple scenarios for value exchange in a rich ecosystem. Any user may generate PTRN tokens by using the PATHEARN mobile app while driving, riding or even while playing amusement games. The app captures location data for vehicles and devices that might be located in front, aside or move in opposite direction of the user’s device.



Captured data attributes include time stamp and location, and depending on relevant market specifics also vehicle type, vehicle brand, vehicle color, weather conditions, day/night light conditions, drivers behavior, evaluation characteristics and general telemetric data such as direction and speed. Collected data attributes depend on and will be in compliance with each jurisdiction's legal and regulatory framework.

The collected data is verified by system nodes under the blockchain algorithm rules and stored in a data hub while in exchange the data collecting user is rewarded with tokens. Both real time and already provided data is available at data marketplace for purchase from other ecosystem members like insurance companies or road infrastructure planning companies, mapping and routing service providers or traffic optimization authorities. The data may be acquired through PTRN tokens. The tokens might be purchased or mined after further data provisioning or products and services delivery in exchange to PTRN. The solution user might use the already generated value in PTRN tokens as payment method to cover insurance policy premium or toll tax and as so satisfy demand for PTRN tokens of the insurance, infrastructure companies or other ecosystem members. Alternatively the PTRN tokens might simply be sold/exchanged for other crypto or FIAT currencies and as so provide monetization of the contributed data value. With multiple usage scenarios it is planned the demand for PTRN tokens to grow. The PATHEARN ecosystem may be used by diverse number of participants - private or business. Software development, AI modeling, insurance, automotive, transport, retail, mapping and routing are only part of the business segments that might benefit from the PATHEARN's global location data ecosystem.

## GEOGRAPHICAL SCOPE

PATHEARN is planned without geographical restrictions and as a global solution. The rate of adoption of the PATHEARN tools worldwide may vary based on local legal and regulatory specifics. PATHEARN concept is already tested in Europe and achieved a promising coverage of the active units in operation in the pilot territories in less than 6 months period. With fast increasing number of users and the already developed applications and infrastructure it is expected the adoption period to be significantly shorter for certain territories and to reach 90% coverage of the targeted vehicles, IoT units or objects in just a few months.

## PRIVACY

At PATHEARN we seriously observe legal compliance. We stick to the rules of Data Protection Regulations for collecting, anonymizing, aggregating, encrypting and storing location data to protect personal information. All different national legal requirements are considered and observed. We analyze strictly the impact of PATHEARN on the rights and interests of all data subjects and take adequate measures with up-to-date and high level technological solutions.

## INDUSTRY SOLUTIONS

### Insurance

While evaluating the risk of loss or accident the vehicle insurance companies evaluate as a Great impact particular attributes related to geolocation – driver behavior, mileage, number of trips, frequency of trips and especially a very important data – percentage or miles driven annually in urban, rural or intercity roads and highways. Based on the historical risk of certain areas for accidents, crime, vandalism etc., the insurance loss risk may change for up to 500% only due to actual location in case all other driver and vehicle related circumstances remain constant.

Insurance risk premium deviation % based on geographical location									
Insurer 1	Insurer 2	Insurer 3	Insurer 4	Insurer 5	Insurer 6	Insurer 7	Insurer 8	Insurer 9	Insurer 10
12.63%	12.53%	12.43%	496.95%	12.18%	16.75%	10.25%	9.47%	13.16%	42.59%

*Deviation in insurance risk based on vehicle registration location per Insurer is 12.53% to 496.95%. Market analysis of 96.4% of chosen EU Member MTPL Insurance.*

Currently vehicle insurance companies have only limited or no access to sufficiently reliable location history data of the insured units. According to the research insurance base they usually base their location history risk assessment on lateral, secondary information like domicile of the owner rather than on actual positioning and mileage driven in particular areas (rural, urban or highway).

The location history data has very significant value for insurance companies – accurate risk assessment, correct insurance policy price premium evaluation, driver behavior evaluation and bonus-malus programs, correct capital adequacy planning for insured risk coverage and regulatory compliance related to correct actual risk evaluation and loss prediction ([7] Solvency II Directive in European Union Law). As for any insurer the above-mentioned categories result in hundreds of millions and even billions of potential savings or optimization, it is clear the location data is of a huge value for the insurance companies. Insurance companies will be able to gain access to large amount of location data at the PATHEARN data marketplace using PTRN tokens. They may purchase PTRN tokens to get location data or provide services like short period vehicle insurance and travel health insurance and accept PTRN tokens as payment method. On the other hand the insurance companies may even directly spend some of the accepted value in PTRN to reward insured drivers for responsible driving and



keeping speed limits, road signs or park in protected parking garages or safer zones and as so reducing accident or crime/vandalism/theft risks exposure. Insurers may also use PTRN tokens to reward drivers involved in their bonus-malus programs. Insurance companies may choose to generate PTRN tokens by providing location data to the PATHEARN location data marketplace like data acquired through different alternative channels or sources. Such sources may be third party contractors like GPS service providers or Automotive OEMs. Then drivers and insurance companies will have both means and ways to generate value in PTRN tokens and spend it for certain services or products and as so fuel the PATHEARN ecosystem in a simple and natural way.

## Marketing and Advertising

Another possible PTRN adoption cases may include marketing and advertising agencies that need location data to verify the visibility of their billboards or other visual materials located in certain zones and as so being able to offer the advertisers certain throughput or actual audience that the visual advertising content reaches to (e.g., numbers of vehicles that pass along the billboards at given hour, date, month). Also, they will be able to publish targeted advertising content depending on the type or size of the audience based on actual location data and traffic specifics (vehicle brands, type of vehicles). In addition, the agencies may reward with PTRN tokens the audience or users that verify advertising content by scanning certain codes or visiting merchandise zones (workshop, showroom, service shop, gift/airdrop locations, etc.).



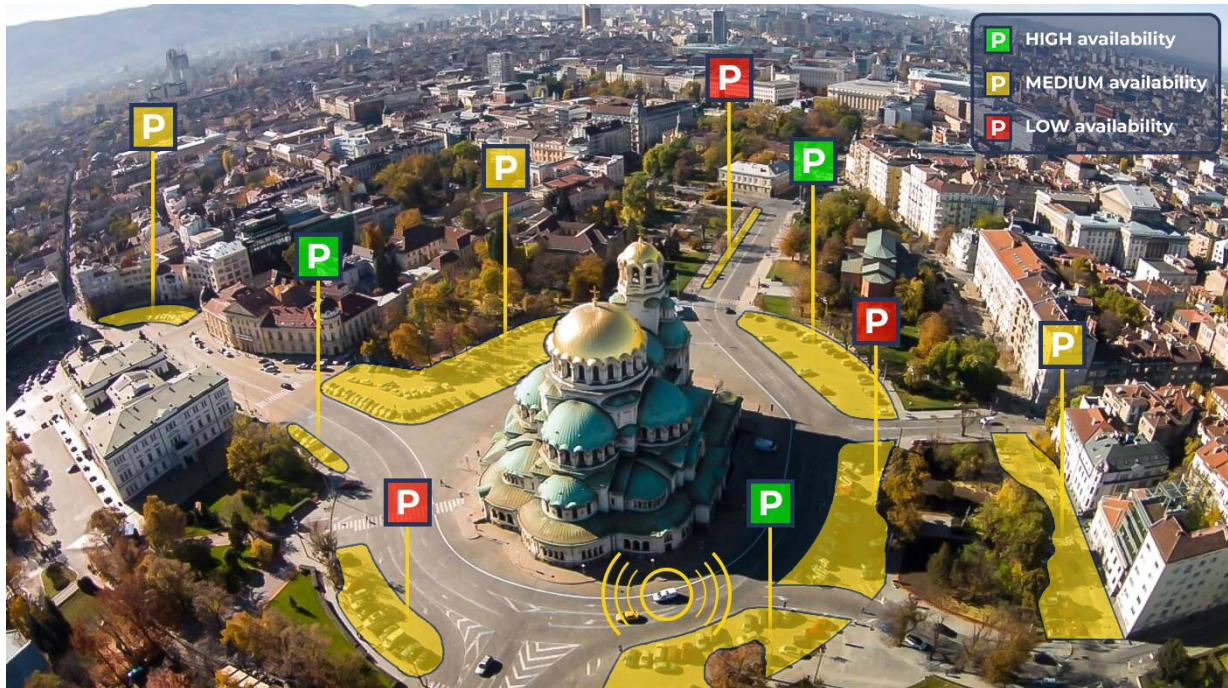
## Infrastructure planning

Infrastructure planning by government, municipal or private companies requires a significant predictive analysis that is finally done using enormous volumes of traffic, movement and finally location related data. Transport infrastructure, roads, traffic, tourism related venues, sightseeing attractions, hotels and similar capacity in smart cities is always planned and managed through availability and processing of large volumes of live and historic data. Such data may be purchased at PATHEARN with PTRN tokens. On the other hand, adopting PTRN tokens as payment method would facilitate and automate related payments for toll taxes, public transport tickets, taxi, attractions, insurance and tourist services.

## Urban Mobility Centers

Urban Mobility Centers (UMC) might generate vehicle location data while checking the status of vehicles in the paid parking city zones. Concurrently city drivers might be rewarded as users with PTRN tokens for contributing with location data at city paid parking zones and thus facilitate allocation information for free parking space. On

the other hand, the drivers might spend the earned PTRN tokens to cover parking fees. Both drivers and UMC would benefit from reduction of free parking space search time, more effective parking space planning and management and as a result reduction in traffic jams, air pollution and improved resource management.



## Retail

Retail chains like supermarkets, gas stations, commercial malls and similar need location data and data analytics in order to identify areas with highest sales potential and locate sales points. Rooting the shoppers/customers traffic in most efficient ways is also related to location data availability and processing. Certain loyalty discounts or programs that stimulate customer loyalty/retention and sales might adopt PTRN.

## Airdrop

To encourage faster adoption of the PTRN token and its broader usage inside our PATHEARN community we plan to distribute a maximum of 2% of the initial PTRN emission for free to PATHEARN partners and ecosystem members. It is expected the Airdrop campaign to accelerate a number of marketing initiatives mostly focused on raising awareness on PTRN. Providing substance for proof of concept of PATHEARN's smart contracts, industry solutions and services is another significant reason for airdropping PTRN tokens to partners, members and users. There are plenty of use case scenarios for utilizing the airdropped PTRN tokens. Insurance companies or volume data contributors may prefer to test service impact, implementation, integration or application before engaging into service package contract. Multiple system users may be eager to test the PTRN wallet technology, interface, exchange options or markets. PTRN airdrop initiative will be provided and available only for partners, members and users that are aware of the initiative terms and confirm willingness to accept the awarded amount.

# PATHEARN TECHNOLOGY

## General

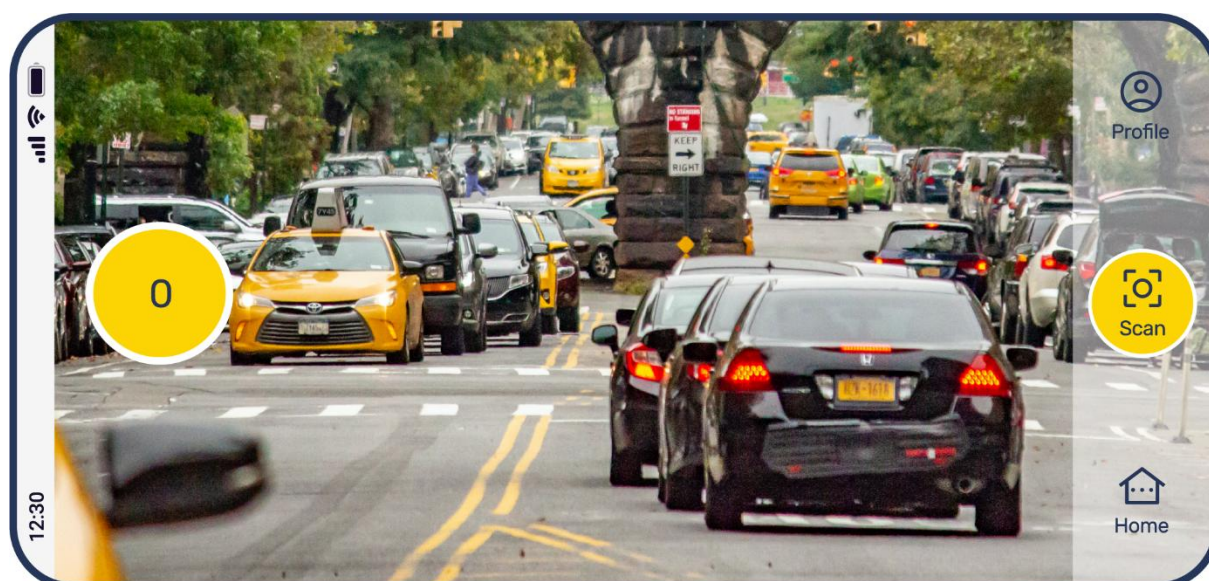
Powered by AI, PATHEARN technology provides significant advantage compared to the traditional GPS location data collecting solutions. PATHEARN is many times more effective due to the fact that data collection is performed not only for the vehicle of the user but for the surrounding objects which finally multiplies the number



of monitored objects in real time. It is also much cheaper and easy to deploy and requires no specific devices to be purchased and dedicated infrastructure to be deployed. The general setup is as simple as usage of mobile or desktop app in return of rewards. Usually, the traditional GPS service providers charge their customers while collecting data that is then provided to third parties. PATHEARN rewards its users for data contribution in a transparent and fair system and allows them to use the generated value for various purposes. Then the adoption of PATHEARN technology is way faster and more efficient.

## Mobile App

The PATHEARN App is available for iOS and Android smartphones. It provides the following base functionalities for the users: capture of the surrounding unique vehicles, transfer the minimum necessary part of the captured data to cloud database in return to points, status of the earned points. In pace with the launching of the data marketplace new functionalities will be added: exchange of accumulated points for PTRN tokens, exchange of PTRN tokens for goods and services.



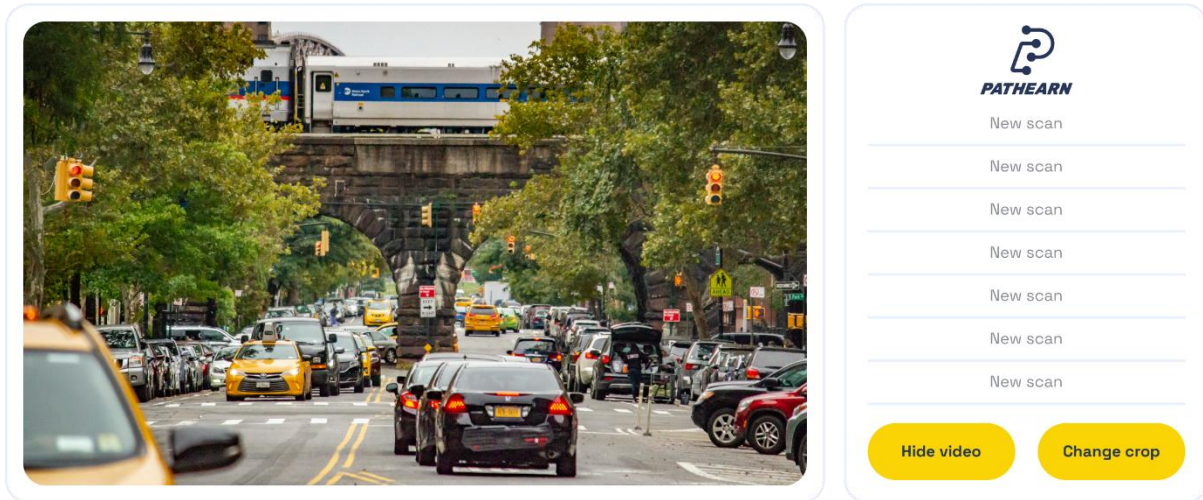
The mobile app of PATHEARN uses video stream (without recording or transmission) from mobile device camera to capture images in real time. Depending on the speed at which the user moves, the auto zoom in/out function is activated in order to recognize more objects. In case the application finds unique vehicle attribute it creates a record of GPS coordinates, time and registration. Depending on demand as well as the legal and regulatory framework of each jurisdiction, other attributes of the captured objects can be added. Similar or duplicated records of the specific object are analyzed by an algorithm and the record with the highest percentage accuracy is highest accuracy score is stored.

When a new data record is registered it triggers a verification process. The verification process lasts up to one hour after which a PTRN token is added to the user account. Users can access the accumulated tokens via mobile application as well as via Web Portal. In the history section of the application, users can see chronologically the last 100 records (as unique IDs) which can also be visualized on the map. Users have no access to actual non-anonymized data.

## MS Windows App

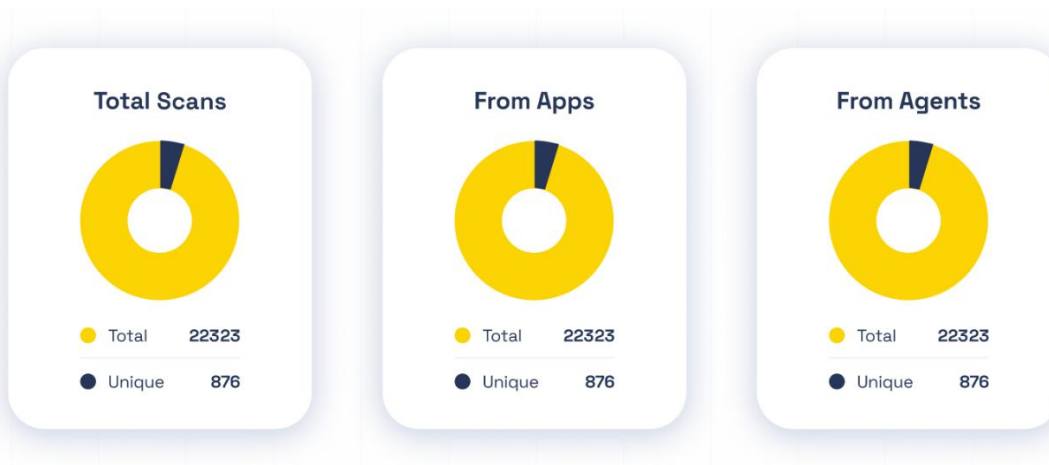
The MS Windows application for PC allows utilization of external IP camera using real-time video streaming (without recording or transmission). The application enables the user to select the most appropriate part of the frame to be used for recognition region of interest (RoI). All records collected within the buffer time of the specific registration number are analyzed by an algorithm and the record with the highest accuracy factor is stored.



When a new data record is registered it triggers a verification process. The verification process lasts up to one hour after which PTRN token is added to the user account. Users can access the accumulated tokens via mobile application as well as via Web Portal. History of the collected records (as unique IDs) can be seen by users on the Web Platform. Users have no access to actual or non-pseudonymized data.



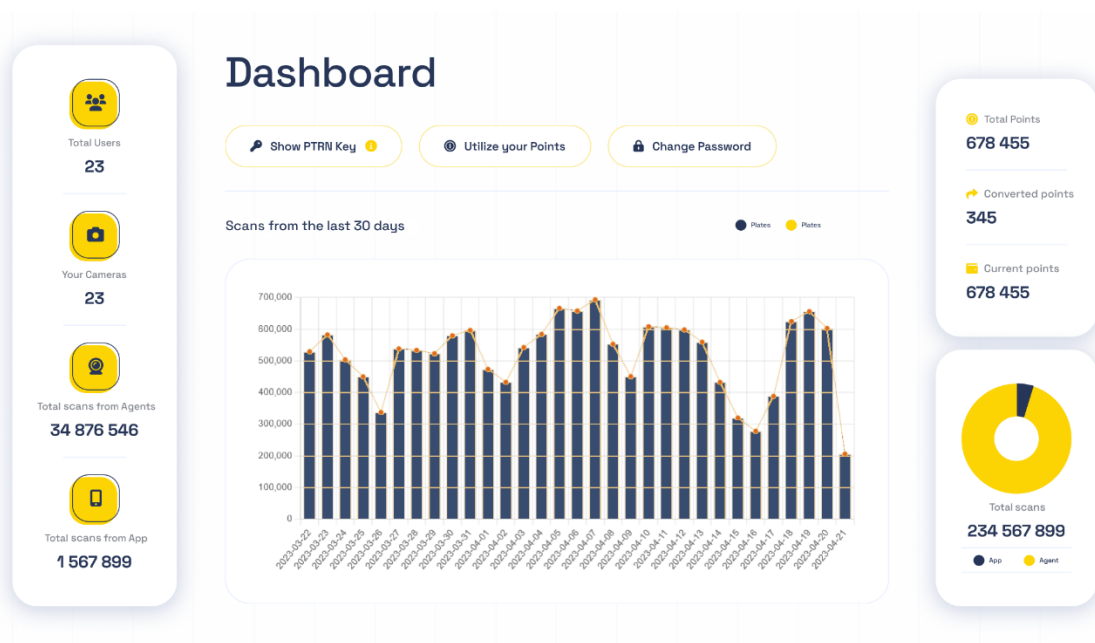
## Web Portal

Registered users of PATHEARN have access to a variety information and graphs about the quantity of data collected with their contribution through the mobile app application and a web portal. The flexibility of the web portal provides options for additional filtering and sorting of the information. All information is provided via unique IDs and no raw data is accessible by the users at any moment.



Date Time	Agent Type	Show on Map
2022-20-02-00:56:34	 App	Show on map
2022-20-02-00:56:34	 App	Show on map
2022-20-02-00:56:34	 App	Show on map
2022-20-02-00:56:34	 App	Show on map

At PATHEARN web-portal, users can track their balance of accumulated points/tokens anytime.



The number of mobile application installations and the number of registered cameras that a user can utilize is unlimited.

Download section with the latest versions of the applications for Android, iOS or MS Windows is available at the web portal.

## Data Marketplace



PATHEARN data platform provides access to processed, verified and certified location data in exchange to PTRN tokens. A more sophisticated options like forecast models and complex analysis are provided as a service. The services include AI related predictions and forecasts of future trends.



## BUSINESS MODEL

The precious value of data is highly recognized by any successful business all over the world. The revenue model is based on collecting fees for data consumption.

PATHEARN has already established multiple relationships with different location data consumers which finally results in value for every single verified data record.

To assure initial fueling of the data ecosystem PATHEARN team already established data collection infrastructure (fixed and mobile) that will constantly generate data. The generated data will be available at the data marketplace and will continuously provide value in PTRN tokens for further development, maintenance and support of the system.

PATHEARN team will be rewarded a small part of the initial emission of the PTRN tokens. Then maintaining a sustainable and valuable PATHEARN ecosystem will be in line with the interests of both PATHEARN users and the supporting PATHEARN team.

PATHEARN team develops and provides AI powered forecast and predictive services that will be monetized with higher value in the ecosystem. The generated value will allow PATHEARN team to benefit from the efforts to maintain and develop further more advanced solutions.

Region (zone)	Stay time (min)	Stay time (%)	Records count	Minimum mileage (km)	Assessment
Risk Group 1	518 395	98.36 %	1 887	nan	Time spent in plate registered zone: <span>High</span>
Risk Group 2	371	0.07 %	6	407	Risk Assessment Insurer: <span>9.40</span>
Risk Group 3	1 001	0.19 %	12	326	Risk Assessment PATHEARN: <span>9.25</span>
Risk Group 4	7 273	1.38 %	58	1 721	Risk assessment for the selected license plate: <span>Appropriate</span>
Total	527 040	100 %	1 963	2 454	<span>Export as CSV</span>

The PATHEARN infrastructure will be rewarded also with small commission fee for each verification and conversion of data record to PTRN as well as for registered demand for data at the marketplace that results in

## PARTNERS



## TEAM

Our international team is composed of:

- experienced software developers
- ICT infrastructure engineers
- network security experts
- blockchain technology specialists
- data scientists, engineers and analysts
- market analysts
- industrial consultants from automotive, insurance, transport and finance
- legal and compliance professionals
- marketing publicists
- visionaries and industry investors



**Dr. Alexander Thume**  
Finance / Transportation

Alexander holds a Dr. rer. pol. degree at the Faculty of Business Administration of the University of Regensburg, as well as a Master of Business Administration (Corporate Finance, Accounting and Informatics grade) at the University of Regensburg. He has more than 25 years of experience in finance, transport and logistics as well as in restructuring consultancy including being Chief Financial Officer with Willi Betz Group and Consultant with Roland Berger and PricewaterhouseCoopers. Currently, Alexander is CFO & Investment Manager at Avelli Group – Avelli AG, Wittenbach/CH.



**Mr. Manfred Multz**  
Industry / Automotive

Mr. Manfred Multz has more than 36 years of experience in the field of corporate management as CEO and GM positions in several multinational Automotive companies, ranging from Daimler AG to Mercedes-Benz AG and STAR COOPERATION GmbH. An entrepreneurial mind with a broad domestic and international network of contacts, including authorities and industry organizations. He has graduated from the Technical University of Munich, and MZSG - Management Center St. Gallen



**Mr. Lukas Wadsack**  
Legal Compliance

Lukas has graduated from the University of St. Gallen with the major legal studies and is a Swiss Attorney-at-Law. Furthermore, he is a Swiss certified tax expert. Lukas is a partner in Wadsack Legal GmbH, which is in BILANZ ranking top 20. He is an active member of the professional society and holds memberships in the Zug and Swiss bar association and is a member of the International Fiscal Association. His professional career started at two of the major business law firms in Zurich and he gained additional experience in all aspects of business law as well as in notarial services.



**Mr. Yuri Mechev**  
Technology

Yuri built impressive career in the telecommunications industry. For more than 7 years he was marketing and sales manager at V-Mobile, a telecommunication company offering traditional and alternative TELCO services and OTT solutions, cloud and Big Data solutions, software development and systems integration. In recent years, Yuri expanded his expertise in the field of blockchain technologies. He played a key role in the creation and development of several blockchain projects including a Swiss-based FinTech startup VSWISS.



**Mr. Christo Daskalov**  
Industry IoT

Mr. Christo Daskalov has more than 11 years of progressive senior management executive experience within multinational and private equity owned companies. He is senior executive in telecommunications and have broad experience in finance, auditing & controlling, general management and executive experience in operative & financial management. Currently Christo is Group CEO & Chairman of the MB of Fleet Services Group, an European top 10 service provider in telematic Fleet & Assets management.



**Mr. Daniel M. Lewin**  
Strategy / Community

Daniel is an early adopter and investor in the cryptocurrency sector. He has advised several successful crypto and NFT startups over the years with regard to strategy, tokenomics, marketing, and community management. Daniel is currently the co-founder and CEO of a multinational eCommerce in the automotive industry where he focuses on strategy, growth marketing, M&A, and financial planning. Prior to starting his own company, Daniel was a Senior Advisor at PricewaterhouseCoopers in Business Valuation and M&A where he advised Fortune 500 companies and an Industry Strategy & Marketing Advisor at Autodesk, a publicly-traded software company.



**Mr. Nikola Stojanow**  
Investment / Blockchain

Nikola has vast experience in business development and blockchain technology. As a co-founder for æternity he was responsible for all partnerships and investments and as a CEO for æternity ventures he positioned the company as one of the leading global blockchain investment and acceleration companies. Prior to this he was Interim Head of Business Development in Veyo Care and Director Regional Business Development Asia-Pacific in STADA. Currently Nikola is General Partner in MCC, partner in Vitoshka Venture Partners, advisor on Blockchain implementation to the Republic of Bulgaria, strategy Advisor in LockChain.co and advisor in AdEx Network.



**Mr. Veselin Netsov**  
Finance/Investment

Veselin was part of EY Bulgaria's Strategy and Transactions team for 15 years. During this time he accumulated direct experience with leading M&A and Project Finance mandates, as well as performing valuation analysis and negotiation support for some of the most significant deals in Bulgaria. He has also participated in various EY projects based in Germany, Austria, Czech Republic, Slovakia, the Baltics, Greece, Albania and Northern Macedonia. In April 2022 Veselin has joined Uneed Industries as Investment Director. He is currently managing the company's investment portfolio and holds BoD positions in several of the investee companies, including V-Mobile AD, Podemcrane AD, Cycle Gets AD and EMGR AD.



**Mr. Martin Yordanov**  
Legal

Martin Yordanov is Master of Laws graduated in 1998 from the Sofia University. He has more than 25 years of experience in ICT law, including being the regulatory and TMT responsible partner in one of the big law firms in Bulgaria for more than 10 years. Since 2017 Martin is the managing partner of Yordanov & Rachev – a boutique business law firm specialized in IT, M&A and regulatory compliance.



**Mr. Kosta Cholakov**  
Insurance

Mr. Kosta Cholakov holds a Master degree in Law, Banking & Financial Law from Queen Mary University of London. He has more than 11 years as Chief Executive Officer of insurance companies and have broad experience in insurance, risk management, business analysis, planning and strategy. Currently Kosta is CEO of DZI Insurance, part of KBC Group.

## REFERENCES

- [1] Hedges Company (2021). How many cars are there in the world in 2021. Market Research.// <https://hedgescompany.com/blog/2021/06/how-many-cars-are-there-in-the-world/>
- [2] Fuel Freedom Foundation (2021). What cars will be driving in 2050?. Market Research// <https://www.fueelfreedom.org/cars-in-2050/>
- [3] Allied Market Research (2021). Insurance Analytics Market Outlook – 2027. Market Research.// <https://www.alliedmarketresearch.com/insurance-analytics-market-A07602#:~:text=Insurance%20Analytics%20Market%20Outlook%20%2D%202027,14.2%25%20from%202020%20to%202027.>
- [4] Emergen Research (2021). Geospatial Analytics Market Size to Reach USD 134.23 Billion in 2028. Market Research. // <https://www.prnewswire.com/news-releases/geospatial-analytics-market-size-to-reach-usd-134-23-billion-in-2028--rising-use-of-gis-for-tracking-covid-19-infected-individuals-following-the-pandemic-outbreak-are-some-key-factors-driving-industry-demand-says-emergen-research-301394238.html#:~:text=6%2C%202021%20%2FPRNewswire%2F%20%2D%2D,latest%20analysis%20by%20Emergen%20Research.>
- [5] Transparency Market Research (2019). Foot Traffic and Customer Location Intelligence Solution Market in Brief. Market Research.// <https://www.transparencymarketresearch.com/foot-traffic-and-customer-location-intelligence-solution-market.html#:~:text=The%20global%20foot%20traffic%20and,US%24%206%20Bn%20in%202019.>
- [6] Fortune Business Insights (2022). Vehicle Analytics Market Size [2022-2028]. Market Research.// <https://finance.yahoo.com/news/vehicle-analytics-market-size-2022-083200156.html#:~:text=Vehicle%20Analytics%20Market%20Size%20%25B2022,Exhibiting%20a%20CAGR%20of%2024.06%25>
- [7] Solvency II (2016). DIRECTIVE 2009/138/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II). Directive of the European parliament. // [L\\_2009335EN.01000101.xml \(europa.eu\)](https://eur-lex.europa.eu/eli/dir/2009/138/oj)