Executive Summary

“Did you know that your personal data is being stolen and sold by large companies for massive profits without your knowledge, consent, or any compensation paid to you? Opiria will change that!

Thanks to the blockchain and the Opiria ecosystem, you are in full control of who can get your personal data, how much of it they can access, and what you get paid for providing it.”

Challenge & Solution

Companies worldwide desperately need precise data from and about consumers to design new products and services and to perfectly target marketing and sales activities. To perform successfully on networked and international markets with a growing number of competitors this demand is continually increasing. This is why data brokerage became a 250 billion USD per year business which is steadily growing.

In order to serve that demand data brokers are stealing personal data, package it and sell it as a commodity to companies worldwide. By doing so they are violating consumer’s data privacy and don’t even compensate them.

Consumers worldwide are realizing this violation more and more and the overall awareness is strongly growing. Therefore they started to take actions to protect their data privacy. This makes it increasingly difficult for data brokers to access the required data with the necessary quality.

Due to that data brokers’ methods are getting even more questionable. In sum the current system is opaque and uncontrollable, consumer’s privacy is violated and companies don’t get enough data and not the required quality.

This already leads to fail investments in the double-digit billions. In addition to that the General Data Protection Regulation (GDPR) of the European Union becomes enforceable from 25 May 2018 and will make it even more complicated for data brokers to access personal data.

It seems like we are in an accelerating downward spiral and there is no way to stop or reverse the trend.

But the good thing is that there is a solution for that serious problem!

There needs to be a fully transparent open marketplace that enables and ensures the following:

- Consumers can control with whom they share which data
- Consumers get proper compensation for the provided data
- Data flows directly from consumers to companies with no middlemen

And this is exactly what Opiria will be doing.
With the PDATA token and the blockchain based Opiria platform we want to create a central marketplace where companies can buy personal data directly from consumers without any middlemen. The PDATA token puts value in personal data and creates a currency that exactly expresses their value.

Consumers can create a profile on the Opiria platform by disclosing personal data and giving allowance that data is being collected via e.g. a browser plugin, a smartphone app, from wearables and smart devices or through surveys. They can decide which data they disclose to the Opiria database. The more they disclose the more valuable their profile becomes. Companies can ask consumers for permission to access the disclosed personal data via the Opiria platform. In case the consumer confirms to provide the data a smart contract between the consumer and the company is established. On this basis the consumer is paid with PDATA tokens and the company receives the requested personal data.

Very importantly Opiria and PDATA enable companies to gather more and more specific personal data from consumers than they can get today from data brokers (e.g. tracking data from wearables, smartphone usage or eye tracking and browsing behavior on the web). That’s a huge added value for companies!

The following figure shows how the blockchain-based Opiria ecosystem works, what personal data can be accessed and how consumers are compensated via PDATA Tokens for disclosing personal data.

Figure: visualization how the Opiria and PDATA ecosystem works

Table: PDATA Token usage

<table>
<thead>
<tr>
<th>Spend PDATA / Purchases</th>
<th>Earn PDATA / Payments (to)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Buy consumer´s personal data from the database</td>
<td>• Consumers who give access to their personal data</td>
</tr>
<tr>
<td>• Send surveys to consumers and receive specific personal data</td>
<td>• Consumers who participate in surveys and provide specific personal</td>
</tr>
</tbody>
</table>

Opiria and the PDATA token create an ecosystem for the secure trading of personal data which fully protects the consumers’ data privacy, gives them full control over their personal data and compensates them.
This fully transparent open marketplace will motivate consumers to provide data. Companies get a quick and easy way to access more specific data of higher quality and will be able to make the right decisions when designing new products and services and better target marketing and sales activities.

In contrast to most ICOs who just sell ideas, Opiria is already a real product with real customers helping lots of Fortune 500 companies. In its current state the Opiria consumer research platform is helping companies worldwide to understand what their consumers needs and requirements are. Via the Opiria web-application and the Opiria smartphone app companies have a direct line to their customers and can get their opinion and feedbacks worldwide and 24/7 in real-time. Fortune 500 companies such as Intel, Volkswagen, BMW, Audi, Mercedes, Freightliner, Procter & Gamble, General Motors and Nissan are already using Opiria.

The blockchain-based Opiria & PDATA Token ecosystem builds on top of that already existing fundamental. We believe this will disrupt the 250 billion USD per year data brokerage business and become the gold standard for companies to access consumers’ personal data. Even further we expect a growth spurt of the whole business because of the easier and better availability of personal data due to PDATA and Opiria.

“Personal data is the oil of the 21st century”

Value Proposition

The PDATA ecosystem system provides:

<table>
<thead>
<tr>
<th>Consumers</th>
<th>Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>● full control over their provided personal data</td>
<td>● motivated consumers willing to provide personal data</td>
</tr>
<tr>
<td>● protection of their anonymity</td>
<td>● perfectly correct personal data</td>
</tr>
<tr>
<td>● protection of their data privacy</td>
<td>● quick and easy access to personal data of high quality</td>
</tr>
<tr>
<td>● proper compensation for the provided personal data</td>
<td>● more specific personal data such as e.g. tracking data from wearables, smartphone usage, browsing behavior on the web</td>
</tr>
<tr>
<td></td>
<td>● better decisions when designing new products and services</td>
</tr>
<tr>
<td></td>
<td>● better targeted marketing and sales activities</td>
</tr>
</tbody>
</table>

Our Vision

“Our vision is to help companies to perfectly understand their consumers”
Our Mission

“Our mission is to establish Opiria as the golden standard for consumer research”

Objectives

- To raise $29 million through a token crowdsale, for the development of the PDATA ecosystem
- To develop the PDATA token ecosystem by February 2019 and to have at least a quarter billion consumers in the database by the end of 2023
The Challenge

In 2017 almost everything imaginable can be developed and the possibilities for new products and services are limitless. Moreover the increasing digitalization of products and services and the possibilities to outsource development and manufacturing leads to a situation in which it becomes increasingly easier for new players to overcome economic barriers to entry and to enter a market. Moreover markets are becoming increasingly networked around the world and the availability of products and services is extremely high. This leads to the fact that nearly each and every product is available anywhere in the world. That means a constantly increasing number of products and services is competing to be bought. This fact is shown when looking at the number of products one can buy on Amazon in the USA. In December 2013 the number of available products was 253 million and increased to 488 million only two years later. Similar numbers for Amazon can be found in all other markets worldwide.

The downside and bitter truth of this development is that 70-80% of all product innovations fail which leads to an annual failed investment of more than 12 billion USD as pointed out by GfK and Harvard Professor Clayton Christensen. The major reason for this, according to Dr. Ken Hudson, is that a „new product does not excite customers and retailers“ respectively because of misunderstanding the needs the product shall solve. That clearly shows that in a world in which almost everything imaginable can be developed the success of a product or a service is defined by how well it is able to meet the needs and requirements of its target customers.

This makes it understandable why companies invest increasingly more in market and consumer research. The annual revenue of market research companies increased by 55% from 28.9 billion USD in 2009 to 44.35 billion USD in 2015.

This increasingly huge investment in market and consumer research to better understand the customer and its requirements and needs should lead to a decreasing number of failing product innovations. But in fact the opposite is the case! But why does market research provide wrong guidance?

There are two reasons for it:

- People are increasingly less willing to provide any kind of personal data
- Many of those who do provide personal data provide inaccurate or false information to protect their data privacy

2 http://presse.serviceplan.de/uploads/tx_sppresse/301.pdf
This is proven by several studies and reports. Giovanni P. et al.\(^6\) show in their study called „Why are people (un)willing to share information“ that on average 55% of all consumers are not comfortable of sharing any kind of personal data. This percentage increases to even 97% when it comes to private and personal data. A similar result is found by Till Dziallas\(^7\). He reports that 50% don’t like online surveys and more than 40% don’t participate in them. This clearly shows that it’s getting more and more complicated to gather personal data from consumers. And it’s getting even worse! A report from Mindi Chahal in the Marketing Week shows that 60% of consumers are providing false information whereby the main reason for this is to protect their privacy\(^8\).

The underlying reason is the consumer’s „perceived privacy risk“ that is defined as the „consumer’s perceptions of risk when marketers or companies attempt to collect, use, and distribute data and personal data about consumers and their behaviour“. The study „Willingness to Provide Personal Information Online: The Role of Perceived Privacy Risk“\(^9\) shows that there’s a strong and statistically significant correlation between perceived privacy risk and the willingness to provide personal data.

But why is consumer’s „perceived privacy risk“ constantly increasing? It’s the worldwide data brokerage business and consumers` increasing awareness about what this business is doing and how it’s harming them. Steve Kroft from CBS News shows in his article „The Data Brokers: Selling your personal information“\(^10\) that the cause for consumer’s constantly increasing perceived privacy risk is that so called data brokers are collecting, analyzing and packaging some of our most sensitive personal data and selling it as a commodity...to each other, to advertisers, to other companies and even the government. The following figure visualizes how consumer data flows in the worldwide system of one of the biggest player in the US, Acxiom Corporation.

\(^7\) http://www.internetworld.de/onlinemarketing/zahlen-studien/beliebtesten-anreize-online-befragungen-1058795.html
\(^8\) https://www.marketingweek.com/2015/07/08/consumers-are-dirtying-databases-with-false-details/
\(^9\) https://kar.kent.ac.uk/5145/1/Online%20Version.doc
Figure: Acxiom’s global data flow (Source: Acxiom)

Jason Morris and Ed Lavandera from CNN report in their article „Why big companies buy, sell your data“\(^{11}\) that the data brokerage industry is now a $200 billion-a-year industry and is constantly growing. Companies like Acxiom, Corelogic or Datalogix have with their on average 1,500 data points per person extremely detailed information about every single US household.

Michael Gregg’s article in the Huffington Post called „How Data Brokers Threaten Consumer Privacy“\(^{12}\) takes it even further and gives some threatening examples about how the data brokerage industry is gathering, cross-referencing and storing that data in massive databases...available for everyone!

The following figure shows the current “Personal Data Ecosystem” (Source: Federal Trade Commission) with its several middlemen. One can see how personal data is collected from the unprotected consumers from “data collectors” and then analyzed and packaged from “data brokers” and then finally being sold to the companies.


\(^{12}\) http://www.huffingtonpost.com/michael-gregg/how-data-brokers-threaten_b_9661468.html
And this is becoming even worse considering that the amount of data being collected is increasing exponentially. Reinhard Clemens\textsuperscript{13}, Board member for T-Systems and Group IT, explains that the amount of data collected in all of the year 2000 is now collected in a single day! That fact is supported by the rapid growth of the data brokerage industry itself which strongly increased its revenue from $150 billion-a-year in 2012 to $200 billion-a-year in 2015. And there’s also no support from the government in sight since the Federal Trade Commission (FTC), the government agency tasked with regulating this industry, admitted it doesn’t even know how many data brokers there actually are and how to regulate them\textsuperscript{14}. But in their report “Data Brokers: A Call For Transparency and Accountability” the FTC states clearly in their conclusion that “the need for consumer protections in this area has never been greater.”

In sum the situation is as follows:

- Companies need precise personal data from consumers to develop new products and services that are successful on the market and to better target their marketing and sales activities


Right now users either don’t provide data or false data to protect their data privacy. The reason why consumers worry about their data privacy is that data brokers are collecting, analyzing and packaging sensitive personal data and selling it as a commodity. Not having precise personal data from consumers leads to the fact that 70-80% of all product innovations fail what leads to an annual failed investment of more than 12 billion USD.

It almost seems like we are in an accelerating downward spiral and there’s no way to stop or reverse the trend.

But the good thing is there is a solution for that serious problem. There needs to be a platform that enables and ensures the following:

- Consumers have full control over the collection and usage of their personal data
- Consumers can control with whom they share their personal data
- Consumers get proper compensation for the provided personal data
- Personal data flows directly from consumers to companies with no middlemen

This assumption is strongly supported by experts and the Federal Trade Commission. Giovanni P. et al. clearly show in their study „Why are people (un)willing to share information“\(^{15}\) that „almost every consumer would be willing to provide personal data if they would have control over the collection and usage of their data.“

The Federal Trade Commission states that in their report „How Big Data Enables Economic Harm to Consumers“ that „users undervalue the personal data they provide“ and that therefore „the economic value of content & data flows largely for free to the big data brokers“. The Federal Trade Commission further states that there needs to be a service that allows users to share their data and get compensated appropriately\(^{16}\).

The Solution

Opiria - the product today

Opiria is a web-based market research platform that allows companies to understand in real-time what consumers think, experience, see and feel in order to design better products and services. The revolutionary approach of Opiria is to establish a direct line between companies and consumers by making use of the fact that 2 billion people all around the world have smartphones and are permanently online and accessible. This allows to gather opinions and feedback from them everywhere and at any time. The following figure shows a simplified diagram of the Opiria architecture and its components.

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By looking at the diagram one can see how consumers and companies are directly connected via the Opria platform. Consumers become part of the Opria platform by downloading the Opria app to their Apple or Android smartphone. Afterwards they create a profile and disclose specific information about themselves (e.g. gender, age, country) by filling out an initial survey.

Companies can access all consumers in the Opria database by logging in to the Opria web application. The Opria web application is the central platform that allows them to create, distribute and analyze surveys. Currently, two types of surveys are supported: mobile surveys and mobile diaries. A mobile survey contains one or several questions and is answered once. A mobile diary can be answered multiple times and tracks consumers' experiences with a product or a service for a certain period of time. The following figure shows how a mobile survey looks like in the Opria web application. The purpose of this question is to understand which iPhone design is preferred by consumers.
Figure: Example for a mobile survey to understand which iPhone design is preferred by consumers

Once a survey is created the companies selects the appropriate consumer profile from the Opria database (e.g. gender: male, age: 40-50 years old, country: USA and China) and distributes the survey to them. The consumers receive the survey in real-time on their smartphone together with a notification. In case of a mobile survey they reply within minutes and all answers return in real-time. In case of a mobile diary the consumers start providing immediate and unfiltered feedback while they experience a product or a service. They can even add multimedia elements to their feedbacks such as text, pictures, audio and videos. Each feedback is called a touchpoint. The following figure shows on the left side how the question regarding the iPhone design looks like in the Opria app. On the right side one can see an example for a touchpoint in a mobile diary. The consumer is providing feedback about his experience with his new car.
Figure: left side – mobile survey: answering a question regarding the preferred smartphone design; right side – mobile diary: providing feedback about the experience with a product

The Opiria web application receives all answers and feedbacks and automatically aggregates and analyzes them. In case of a mobile survey the result of all answers of all consumers worldwide gets visualized on selectable charts and in table form. Since GPS position of each consumer is tracked Opiria also visualizes the location of each answer on a world map. This allows to understand differences in opinions in different regions. The following figure shows the result of the design survey. Looking at the bar chart one can clearly see which design variant is preferred. The map shows where answers came from. One can even filter the results using filter criteria such as gender, age and country to understand for example the differences between age groups.
In case of a mobile diary all touchpoints of all consumers get visualized on a map and in a timeline. The map visualizes the so called customer journey and allows to understand the experience with a product or service from the consumer’s perspective. The timeline below the map contains the touchpoint cards and visualizes them in their chronological order. The vertical alignment of the touchpoint cards in the timeline represents the satisfaction at each touchpoint. The touchpoint cards can be expanded to see exactly the given feedback including comments, pictures, audio and videos.
Already in the current state Opiria is revolutionizing the way consumer research is done and solves its two major problems: time and cost.

The following figure shows how market research is traditionally done. A company with a specific market research question asks its market research department to perform a market research study. The market research department subcontracts a market research institute with that task which again subcontracts a panel provider to get access to the relevant consumer group. Each described step costs time and money. The result is that the average market research study takes 4-6 weeks and costs 20,000 USD.

Can you imagine waiting 6 weeks to get the answer for a market research question where on the other hand markets are getting continuously more agile and product development and lifetime cycles become shorter and shorter?
In contrast to that Opria eliminates all middlemen and establishes a direct line between companies and consumers. The following figure shows how companies can directly connect with consumers all around the world via the Opria platform. This allows to get results and insights 50 – 100 times faster and reduces the costs for consumer research by 95%.

Opria as described above and available today is already successfully in use on the international market and helps companies to better understand the requirements and needs of consumers. The following list shows some well known current Opria customers:

- Daimler AG
- Volkswagen
- Freightliner
- General Motors
- Nissan
- BMW
- Audi
- Intel
- Procter & Gamble
Opiria 2.0 - adding objective data

The next big milestone on the Opiria development roadmap is to add tracking and analysis of objective consumer behavior data until mid 2018. The objective data channels that will be added are eye tracking and emotion analysis. In combination with the subjective answers and feedbacks this will allow to get unprecedented insights in consumer’s behavior, needs, expectations and requirements. In the following figure one can see based on a simplified diagram of the Opiria 2.0 architecture how the existing one will be extended.

![Simplified diagram of the Opiria 2.0 architecture](image)

*Figure: simplified diagram of the Opiria 2.0 architecture*

With version 2.0 the Opiria platform will also allow to run web browser based surveys. This will enable companies to send surveys via email, a weblink or to integrate them directly in a website. The Opiria eye tracking browser plugin will enable to measure subject's gaze behavior when looking at stimuli (e.g. videos or pictures) embedded in a survey or when browsing the internet, playing games or interacting with software. At the same time the Opiria emotion analysis browser plugin will measure consumers’ emotions by looking at their facial expressions. The following figure provides an example of this combined measurement of gaze behavior and emotions.
The Opiria app will also be enhanced respectively and measure consumers’ emotions during surveys by looking at their facial expressions. The Opiria web application will be extended so that it allows to analyze the measured objective data channels. This will for example enable companies to replay gaze behavior and emotions together to understand how consumers interact with a website or view an advertisement and how that influences their emotions. Even further, high level data analysis methods such as heat maps, gaze paths, area of interest based gaze analysis and emotional fingerprints will be implemented. Heat maps allow to understand the gaze and attention distribution while interacting with a website or an advertisement while a gaze path visualizes the chronological order of glances. An area of interest based analysis uncovers how often and how long a consumer was looking at certain objects or regions (e.g. the company logo in an video or an advertisement on a website). An emotional fingerprint visualizes the distribution of the consumers’ emotions for a certain period of time and allows to understand how for example a website or an advertisement is perceived in general.

The PDATA token ecosystem

With the PDATA token and the blockchain based Opiria platform we want to create a central marketplace where companies can buy personal personal data directly from consumers without any middlemen. The PDATA token puts value in personal data and creates a currency that exactly expresses their value. The ecosystem created by the PDATA token and Opiria platform will open up a completely new marketplace where the value of PDATA is ultimately determined by the market forces of demand and supply of personal data on the Ethereum blockchain. Therefore when the
demand of personal data grows, the value of the PDATA token will also go up similar to any other open market mechanism.

This ecosystem will function without any central authority or control. It takes care of all the stages related to personal data during its lifetime from filling the marketplace with personal data to the use of the personal data from companies.

The great advantage of the PDATA token ecosystem is that it is an ecosystem for the secure trading of personal data which fully protects the consumer’s data privacy. This is due to the functional mechanism of the blockchain in which a consumer is just an address in the internet. In addition to that each consumer sees which company wants what kind of data from him and he can decide whether he wants to give access to his personal data or not. Due to this mechanism a direct relationship of trust between the consumer and the company without any middlemen is established. We believe the right mechanism to encourage consumers to provide personal data is to pay them when they give companies access to their personal data.

For all these reasons, we need a token to help tie together this economy - we refer to this token as PDATA.

**General overview of the ecosystem**

The architecture of the ecosystem is an extension of the Opria 2.0 architecture. The main new elements on the tracking side are the following:

- tracking of the consumer behavior, both when using the laptop/PC and the smartphone/tablet (e.g. browsing behavior, online purchases, software/app usage)
- measurement of data from wearables (e.g. activities, heart rate) and smart devices (e.g. smart home, smart scale)

Overall there are multiple modules used in the general architecture of this ecosystem as given below:

- data storage database module
- backend
- Opria web application for companies
- the smart contract for providing personal data
- the smart contract for accessing personal data
- Opria native app survey module
- Opria native app emotion detection module
- Opria native app smartphone/mobile device usage tracking module
- Opria native app wearables (e.g. fitness tracker) data tracking module
- Opria native app smart devices (e.g. smart home, smart scale) data tracking module
- Opria survey browser plug-in
- Opria emotion detection browser plug-in
- Opria eye tracking browser plug-in
- Opria web-browsing behavior browser plug-in
- Opria PC/laptop usage tracking module
- the token sale smart contract module
It is not the purpose of this white paper to detail every single module. Given below is a simplified diagram with a simplified flow.

Figure: simplified diagram of the general architecture of the ecosystem

High level view of the process
Every consumer and company will be associated with a wallet address.

Personal data acquisition from consumers

In order to be part of the ecosystem consumers sign in and create their profile. This contains the following steps:

- fill out initial survey and disclose basic necessary personal data (demographics)
- fill out additional surveys regarding different topics such as interests, education, financial data, health data and so on
- install Opiria app on smartphone and define which personal data shall be disclosed (e.g. smartphone usage, app usage and data, browsing behavior, touchscreen entries, online shopping behavior, emotion tracking, location tracking, data from connected wearables, data from connected smart devices, and so on)
- install Opiria browser plug-in and define which personal data shall be disclosed (e.g. browsing behavior, keyboard entries, online shopping behavior, screen recording, eye tracking, emotion tracking, give access to social networks, give access to contacts, and so on)

Two important mechanisms help to (a) motivate consumers to sign up to the Opiria ecosystem and to (b) motivate them to disclose as much personal data as possible.
a. Motivation to sign up: the consumer receives an initial payment from the Opria ecosystem for signing up and disclosing personal data as well as installing the Opria app and the Opria browser plug-ins. The amount of the initial payment depends on the quantity of disclosed personal data. In the first and second year the initial payment is higher to get consumers to sign up as fast as possible. We believe this is the right mechanism to motivate consumers to sign up and disclose personal data.

b. Motivation to disclose more personal data: the more personal data the consumers disclose the more valuable their profile becomes and the more tokens they get when they allow companies to access their personal data. We believe that this is the right mechanism to motivate consumers to disclose more personal data.

All disclosed personal data will be stored in the database.

Access personal data from consumers

In order to access personal data from consumers companies simply open an account in the Opria ecosystem free of charge. After opening an account companies can access disclosed personal data through the PDATA marketplace if the consumers give them access. The following two scenarios describe exemplary how the PDATA ecosystem works.

Scenario 1 - access existing personal data

In this scenario (see also figure below) a company wants to access personal data from a consumer which is already available in the consumer’s profile. In step 1 the company requests to access the personal data. Due to that the consumer receives (2) that request and can decide whether to provide the data or not. In case the consumer confirms (3) to provide the data a smart contract between the consumer and the company is established. On this basis the consumer is paid with PDATA tokens (4) and the company receives the requested personal data (5).

Figure: steps to access personal data already existing in consumer’s profile
Scenario 2 - access not yet existing personal data

In this scenario (see also figure below) a company, wants personal data from a certain consumer group which is not yet available in the consumer’s profile.

Possible scenarios are:

- Ask a specific group of consumers to access their location and physio data (from a fitness tracker) for a few days
- Request allowance from a specific group of consumers to track their web browsing behavior including eye tracking and emotion measurement
- Send a survey to a specific group of consumers

The company filters the consumer profiles and sends a request (1) to the matching profiles (e.g. male, 20-30, annual income 50,000 – 60,000 USD). The consumers with the right profile receive the request and (2) can decide whether to participate in the survey or not. In case the consumer confirms (3) a smart contract between the consumer and the company is established.

After that the consumer starts tracking its location and physio data (4). After submitting the personal data the consumer is paid with PDATA tokens (5) and the company receives the data (6).

Figure: steps to access personal data which is not yet existing in consumer’s profile

Payment and Value Flow

All payments will be done via the blockchain in PDATA tokens, in real time once the right conditions are met.

The high level concept of the PDATA tokens flow is that the company sends a payment $x_{dp}$ to the consumer for receiving its personal data and the Opiria platform receives a share $x_{os}$. Thereby the consumer’s revenue $x_{cr}$ is:

$$x_{cr} = x_{dp} - x_{os}$$

With:

- $x_{cr}$: consumer’s revenue
● $x_{op}$: company's payment
● $x_{op}$: Opiria's share

The only exception of this general value flow is when the consumers sign in and create their profile. In that case the Opiria platform sends a payment $x_{op}$ to the consumer. In that case the consumers revenue $x_{cr}$ is:

$$x_{cr} = x_{op}$$

With:

● $x_{cr}$: consumer's revenue
● $x_{op}$: Opiria's payment

**Smart contracts**

All smart contracts, where applicable, will follow the ERC:20 standards. If new standards are approved by the Ethereum community in the future, such standards will be used.

All smart contracts will also be audited by third parties as much as reasonable.

**The PDATA advantage matrix**

The following table shows the situation with the current ecosystem and how it looks like with the PDATA token ecosystem.

<table>
<thead>
<tr>
<th>Current eco system</th>
<th>PDATA token and payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumers have no control over their personal data</td>
<td>Consumers have full control over their personal data</td>
</tr>
<tr>
<td>Misuse of consumers’ data</td>
<td>Misuse is per se impossible</td>
</tr>
<tr>
<td>Consumers’ anonymity is not protected</td>
<td>Protection of consumer’s anonymity due to blockchain mechanisms</td>
</tr>
<tr>
<td>Consumers don't want to participate in surveys</td>
<td>Consumers are happy to participate due to full privacy protection and compensation</td>
</tr>
<tr>
<td>Consumers protect their personal data and prevent access to it</td>
<td>Consumers provide personal data thus enabling easy access to it</td>
</tr>
<tr>
<td>Consumers provide false personal data to protect their privacy</td>
<td>Consumers provide correct personal data</td>
</tr>
<tr>
<td>Companies receive false personal data and make wrong decisions</td>
<td>Companies receive personal data of high quality and make better decisions</td>
</tr>
<tr>
<td>Companies have to work through data brokers to access consumer’s personal data</td>
<td>Companies can quickly and easily access consumers’ personal data</td>
</tr>
</tbody>
</table>
Companies can only access consumers’ data which is available in data brokers’ database

Companies can access tailored personal data (e.g. web browsing, tracking data from wearables)

Consumers get no compensation for their personal data

Consumers get compensation for the provided personal data

Several middlemen between consumer and companies

No middlemen between consumer and companies

Opaque and uncontrollable system

Fully transparent open marketplace

The Market

Data Brokerage

Data brokers are collecting, analyzing, cross-referencing, packaging and storing consumers’ most sensitive personal data and selling it as a commodity...to each other, to advertisers, even the government, often without our direct knowledge.

In 2012, the data brokering industry generated $150 billion in revenue – that’s twice the size of the entire intelligence budget of the United States government. In 2015 the revenue of the data brokerage industry was already $200 billion-a-year industry and is constantly growing according to Jason Morris and Ed Lavandera from CNN\(^\text{17}\). Companies like Acxiom, Corelogic or Datalogix have with their on average 1,500 data points per person extremely detailed information about every single US household. Gartner\(^\text{18}\) estimates there may be up to 5,000 data brokers worldwide constantly collecting consumers’ data without their knowledge and permission.

The following table FTC's report “Data Brokers- A Call For Transparency and Accountability”\(^\text{19}\) provides a snapshot of the main categories of data broker clients by product type and industry sector.

<table>
<thead>
<tr>
<th></th>
<th>Direct Marketing</th>
<th>Online Marketing</th>
<th>Marketing Analytics</th>
<th>Identity Verification</th>
<th>Fraud Detection</th>
<th>People Search</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Payment Providers</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attorneys &amp; Investigators</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automotive Industry</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Packaged Goods Manufacturers</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Data Brokers | x | x | x | x | x | x
--- | --- | --- | --- | --- | --- | ---
Educational Institutions | x | | x | x | x | x
Energy/Utilities | x | | | | | |
Government Entities | x | x | x | x | x | x
Hospitality/Travel/Entertainment | x | x | x | | | |
Individual Consumers | | | | | x | |
Insurance Companies | x | x | x | x | x | x
Lenders/Financial Services Firms | x | x | x | x | x | x
Marketing/Advertising Firms | x | x | x | x | x | x
Media | x | x | | | | x
Non-profit Entities/Political Campaigns | x | x | x | x | x | x
Pharmaceutical Firms | x | x | | | x | x
Real Estate Services | x | | | | x | x
Retail Companies | x | x | x | x | x | x
Technology Companies | x | x | x | | | x
Telecom Companies | x | x | x | x | x | x

Market Research
Market research is any organized effort to gather information about target markets or customers to determine whether a particular product/service will satisfy the needs of its customers. Market research provides important information to identify and analyze the market and consumers needs as well as market size and competition. The annual global revenue of market research companies increased by 55% from 28.9 billion USD in 2009 to 44.35 billion USD in 2015. The market research market will keep on growing and become increasingly important with the economy becoming more and more competitive with each passing day, having apt knowledge about the concerns and preferences of customers has become integral for any company.

Competitive Landscape
Data Brokerage

---

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acxiom</td>
<td>Provides consumer data and analytics for marketing campaigns and fraud detection. Its databases contain personal data about 250 million consumers worldwide with over 1500 data segments for nearly every U.S. consumer.</td>
</tr>
<tr>
<td>Corelogic</td>
<td>Provides data and analytic services to companies and government based primarily on property information, as well as consumer and financial information. Its databases include over 795 million historical property transactions, over ninety-three million mortgage applications, and property-specific data covering over ninety-nine percent of U.S. residential properties, in total exceeding 147 million records.</td>
</tr>
<tr>
<td>Datalogix</td>
<td>Provides companies with marketing data on almost every U.S. household and more than one trillion dollars in consumer transactions. In September 2012, Facebook announced a partnership with Datalogix to measure how often Facebook's one billion users see a product advertised on the social site and then complete the purchase in a brick and mortar retail store.</td>
</tr>
<tr>
<td>eBureau</td>
<td>Provides predictive scoring and analytics services for marketers, financial services companies, online retailers, and others. eBureau primarily offers products that predict whether someone is likely to become a profitable customer or whether a transaction is likely to conclude in fraud. It provides clients with information drawn from billions of consumer records, adding over three billion new records each month.</td>
</tr>
<tr>
<td>ID Analytics</td>
<td>Provides analytics services designed principally to verify people's identities or to determine whether a transaction is likely fraudulent. The ID Analytics network includes hundreds of billions of aggregated data points, 1.1 billion unique identity elements, and it covers 1.4 billion consumer transactions.</td>
</tr>
<tr>
<td>Intelius</td>
<td>Provides companies and consumers with background check and public record information. Its databases contain more than twenty billion records.</td>
</tr>
<tr>
<td>PeekYou</td>
<td>Has patented technology that analyzes content from over sixty social media sites, news sources, homepages, and blog platforms to provide clients with detailed consumer profiles.</td>
</tr>
<tr>
<td>Rapleaf</td>
<td>Is a data aggregator that has at least one data point associated with over eighty percent of all U.S. consumer email</td>
</tr>
</tbody>
</table>
addresses. Rapleaf supplements email lists with the email address owner's age, gender, marital status, and thirty other data points.

| Recorded Future | Recorded Future captures historical data on consumers and companies across the Internet and uses that information to predict the future behavior of those consumers and companies. As of May 2014, Recorded Future had access to information from over 502,591 different open Internet sites. |

**Market Research**

<table>
<thead>
<tr>
<th>Nielsen</th>
<th>The Nielsen Corporation is a global marketing research firm, with worldwide headquarters in New York City, United States. The company gives marketers reliable and objective information on the impact of marketing and sales programs. ACNielsen began expanding internationally in 1939, and now operates in more than 100 countries.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kantar</td>
<td>Kantar is the Data Investment Management division of WPP, and one of the world's largest insight, information and consultancy groups. It was founded in 1993 and consists of a network of 12 specialized operating brands, with around 30,000 employees working in 100 countries in various research, insight and consultancy disciplines. Its global headquarters are in London, UK.</td>
</tr>
<tr>
<td>Quintiles IMS Holdings, Inc.</td>
<td>Quintiles IMS is an American multinational company serving the combined industries of health information technologies and clinical research. QuintilesIMS is the world’s largest contract research organization as ranked by reported service revenues, and is focused primarily on Phase II-IV clinical trials and associated laboratory and analytical services.</td>
</tr>
<tr>
<td>Ipsos Group S.A.</td>
<td>Ipsos Group S.A. is a global market research and a consulting firm with worldwide headquarters in Paris, France. Since 1990, the Group has created or acquired numerous companies throughout the world. In October 2011, Ipsos acquired Synovate, resulting in a newly combined Ipsos organization that ranks as the world’s third largest research agency. As of 2014, Ipsos has offices in 88 countries, employing 16,530 people.</td>
</tr>
<tr>
<td>Company</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>GfK SE</td>
<td>Established in 1934 as Gesellschaft für Konsumforschung (Society for Consumer Research) is Germany's largest market research institute, and the fourth largest market research organisation in the world.</td>
</tr>
<tr>
<td>IRI</td>
<td>An American market research company which provides clients with consumer, shopper, and retail market intelligence and analysis focused on the consumer packaged goods (CPG) industry. IRI's clients include 95 percent of the Fortune Global 500 CPG, retail and healthcare companies. The firm operates in 58 countries.</td>
</tr>
<tr>
<td>Westat</td>
<td>An employee-owned statistical survey research corporation in Rockville, Maryland, USA, providing research services to agencies of the U.S. Government, as well as companies, foundations, and state and local governments. Westat conducts studies on health conditions and expenditures, academic achievement and literacy, medical treatments and outcomes, exposure assessments, program evaluation, information management and communications solutions, and respondent knowledge, attitudes, and behaviors.</td>
</tr>
<tr>
<td>INTAGE HOLDINGS Inc.</td>
<td>A provider of marketing research and consulting services. The Market Research and Consulting segment is engaged in marketing research operations, including customer panel research, retail shop panel research and other research activities; customized research services, including Internet research, mail survey, visiting interview survey and qualitative research, as well as the provision of related consulting services. As of March 31, 2014, the Company had 24 subsidiaries and one associated company.</td>
</tr>
<tr>
<td>comScore</td>
<td>An American media measurement and analytics company providing marketing data and analytics to enterprises, media and advertising agencies, and publishers. comScore maintains a group of users who have monitoring software (with brands including PermissionResearch, OpinionSquare and VoiceFive Networks) installed on their computers. In exchange for joining the comScore research panels, users are presented with various benefits, including computer security software, Internet data storage, virus scanning and chances to win cash or prizes.</td>
</tr>
</tbody>
</table>
The NPD Group, Inc. is a market research company. The NPD Group operates in 20 countries, interviews 12 million consumers a year, and monitors consumer purchase data from over 165,000 stores. NPD also provides a service called VIP Voice that allows consumers to complete surveys about the products and services that they use.

Token Mechanism

Crowdsale Token Launch (CTL)/ICO

Many people refer to a crowdsale token launch (CTL) as an ICO, Initial Coin Offering. A crowdsale token launch is a way for companies to raise capital by issuing their own cryptocurrency, which is usually used on a company’s platform. As you can read in Fortune21: “Renowned venture capitalists like Chris Dixon of Andreessen Horowitz and Fred Wilson of Union Square Ventures now tout ICOs as a new form of corporate financing.” "In the second quarter [of 2017], ICO issuance was greater than venture capital, with $210 million [invested in ICOs] versus $180 million [invested into startups by VCs]. We do expect that transition to continue; it’s why we’re doing what we’re doing." From TechCrunch22.

Initial Coin Offerings can be considered as an alternative form of fundraising that has emerged outside of the traditional financial system. This model has helped a lot of successful projects and companies get the funding required to start their business. However, ICOs have nothing to do at all with an Initial Public Offering (IPO) in which shares are being sold to the public.

How CTL Tokens are traded

Once the CTL is completed and the project launched, the ICO tokens can get listed on cryptocurrency exchanges to trade against other cryptocurrencies. The largest exchange by volume today is Poloniex23. The price usually reflects the overall cryptocurrency market sentiment, project-specific news, and the addition of new features.

The Opinia Crowd Token Launch (CTL)

Opinia will crowdsale a token called “PDATA”. We are doing a crowdsale token launch (CTL) for PDATA tokens on January 8th 2018. This will probably be the first "personal data" crowdsale token launch.

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21 http://fortune.com/2017/06/26/ico-initial-coin-offering-investing/
23 https://poloniex.com/
Each PDATA token will be used as a form of payment to consumers to buy personal data from them.

The CTL is a vital component to bring the Opiria personal data database to fruition, enabling us to build an ecosystem while also motivating consumers to provide their personal data to the database. The database will play a key role in developing a central marketplace where companies can buy personal data directly from consumers without any middlemen.

PDATA Token radically changes the current opaque and uncontrollable ecosystem in which personal data is stolen from unprotected consumers without compensating them. PDATA Token turns this into a fully transparent open marketplace without any middlemen for the secure trading of personal data which puts consumers in control and fully protects their data privacy in combination with a proper compensation for their personal data. It all happens on the Ethereum blockchain.

**The Ethereum Blockchain**

Ethereum\(^2\) is an open-source, public, blockchain-based distributed computing platform featuring smart contract (scripting) functionality, which facilitates online contractual agreements. It provides a decentralized Turing-complete virtual machine, the Ethereum Virtual Machine (EVM), which can execute scripts using an international network of public nodes.

The tokens can be earned by providing personal data to the database respectively companies or can be used to obtain personal data from consumers in the database. The utility of the token is based on distributed decentralized consumer submitted personal data.

**Where do we need help?**

We are building the first blockchain based marketplace for the secure trading of personal data where companies can buy personal data directly from consumers without any middlemen.

**Why is this important?**

Having personal data from consumers is key for companies worldwide to make the right decisions. Currently data brokers are stealing this personal data without the consumer’s permission and sell it as a commodity. This is dramatically harming consumers’ data privacy. We are therefore building the largest database of personal data where companies can directly access consumers' personal data without any middlemen. Thereby we are building almost a direct line between consumers and companies with a high level of security and trust.

**PDATA Token Usage**

**Spend PDATA / Purchases**
- Buy consumer’s personal data from the database
- Request specific personal data from consumers

---

\(^2\) https://www.ethereum.org/
Earn PDATA / Payments (to)

- Consumers who give access to their personal data
- Consumers who provide specific personal data to companies on demand
Leadership

Our core team members have proven track records of entrepreneurial and technical skills and speak multiple languages.
The other team members have expertise in multiple areas including entrepreneurship, technology, business development, and sales and marketing. In addition, all members have prior experience in either founding or working for startup companies.

Core Team

Dr.-Ing. Christian Lange | Founder & CEO

Christian has a strong scientific and engineering background. He obtained a Master’s of Science and a Ph.D. His Master’s of Science from Technical University of Munich is in Mechanical Engineering. His Ph.D. from Technical University in Munich is in Human Factors and Ergonomics. His scientific career has led to 40 publications, 35 talks on international conferences and 2 patents. In 2008 he obtained the prestigious Stroebel price from the Bavarian Dept. of the Interior for his important work in autonomous driving and traffic safety. He was also head of the task force for EN ISO 15007 “Measurement of driver visual behaviour with respect to transport information and control systems” - a globally accepted standard which is used worldwide from all automotive OEMs and tier 1 suppliers as well as Universities and Research Institutes.

Christian has a proven track record of entrepreneurship. In 2005 he founded Ergoneers GmbH. Ergoneers GmbH initially started as a sole eye tracking company manufacturing eye tracking hardware and related software.

Over the years the software side became increasingly important and turned into a complete data acquisition and analysis platform, called D-Lab, for objective analysis of human behavior supporting many different sensors and inputs (e.g. eye tracking, physiology, video, audio, ethernet, CAN, motion capturing).

D-Lab became an industry standard in the automotive industry including almost all automotive OEMs (e.g. Audi, BMW, VW Concern, Opel, Porsche, GM, Ford, Chrysler, Hyundai, PSA, Jaguar Land Rover, Volvo, Nissan, Toyota, Honda, and others), truck OEMS (e.g. Freightliner, MAN, PACCAR, Volvo Trucks) and Tier 1 suppliers (e.g. Siemens, Bosch, Continental, Takata, Fujitsu, Honeywell, Garmin and others). Besides that D-Lab is used from Universities and Research Institutes worldwide (e.g. NASA, Army, Fraunhofer Institut, MIT, Stanford, TUM, University of Cambridge, NHTSA and many others) and lots of fortune 500 companies (e.g. Microsoft, Intel, Google, Apple, Nokia, Samsung, P&G, Nestle). All together D-Lab has 1000+ customers worldwide.

He also grew a worldwide sales partner network with sales partners in more than 20 different countries (including China, Japan, South Korea, Singapore, Malaysia, Taiwan, Australia,
South Africa, UK, France, Italy, Switzerland, Spain, Sweden, USA, Canada, Brazil, Chile, Saudi Arabia, Israel, Turkey). In 2011 he restructured the company to support the international growth. He founded Ergoneers of North America Inc. to better serve the US market and Ergoneers International Holding GmbH, the overarching body with its subsidiaries Ergoneers GmbH and Ergoneers of North America Inc. He was founder and CEO and he boot-strapped Ergoneers Group from $0 to a $5+ million in revenue without any equity investment. In 2015 he exited Ergoneers Group.

**Marlene Gagesch | Co-Founder & CTO**

Marlene obtained a Master’s of Science in Computer Science from Friedrich Alexander Universität Erlangen-Nürnberg. Her specialties include scalable software architecture, database design, computer vision, requirement engineering and management of international software teams. She has a proven track record of managing the software development department of companies with internationally successful software products.

Her early experience includes working as software developer and requirement manager at Siemens AG healthcare division being responsible for software architecture and machine vision algorithms for Siemens’ mammography solutions. In 2007 Marlene joined Ergoneers GmbH in its early startup days. She was head of the software development department from 2007 until 2015. During that time she managed an internal team of software developers and testers as well as several offshore software service suppliers. Under the responsibility of Marlene the software product D-Lab grew into an internationally successful complete data acquisition and analysis platform with 1000+ B2B customers.

Marlene was born and grew up in Romania and later moved to Germany.

**Opuria software development team**

The Opuria software development team consists of the following nine full time developers.

<table>
<thead>
<tr>
<th>Toma Corbu</th>
<th>Marius Balaban</th>
<th>Vlad Blana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Architecture</td>
<td>Backend Development</td>
<td>Frontend Development</td>
</tr>
</tbody>
</table>

www.Opiria.com
<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Olteanu</td>
<td>Frontend Development</td>
</tr>
<tr>
<td>Dorin Danilov</td>
<td>App Development</td>
</tr>
<tr>
<td>Eugen Melentii</td>
<td>App Development</td>
</tr>
<tr>
<td>Daniel Turcan</td>
<td>App Development</td>
</tr>
<tr>
<td>Bogdan Uretu</td>
<td>Testing</td>
</tr>
<tr>
<td>Razvan Tautu</td>
<td>UX Design</td>
</tr>
</tbody>
</table>

### Opiria sales partners

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott Hodgins</td>
<td>Director Acuity Sales Partner UK</td>
</tr>
<tr>
<td>Jerry Jiang</td>
<td>CEO INFO.instruments Sales Partner China</td>
</tr>
<tr>
<td>Rohit Sasidharan</td>
<td>Sales Manager Sales Partner USA</td>
</tr>
</tbody>
</table>
Board and Advisors

George Popescu

George has his roots in science and engineering. He has obtained three Master's Degrees: a Master's of Science from MIT working on 3D printing, a Master's in Electrical Engineering and Computer Science from Supelec, France and a Master's in Nanosciences from Paris XI University. His scientific career has led to about 10 publications and patents.

George has a proven track record of entrepreneurship. Over the last 10 years, he has founded multiple companies in online lending, craft beer brewery, exotic sports car rental space, hedge funds, peer-reviewed scientific journal, etc. He advised 30+ early stage start-ups in different fields. He was also a mentor at MIT’s Venture Mentoring Services and Techstars Fintech in NY. George is originally from Romania and grew up in Paris, France.

He is also the founder, CEO, and Editor in Chief of Lending Times, a media and affiliate marketing company in the peer-to-peer marketplace, and alternative lending space. Lending Times has won the Best Journalist Coverage from the LendIt Industry Awards on Tuesday, March 9, 2017. The other nominees were Reuters, Business Insider, deBanked, Bankless Times and Tradestreaming. The award was earned for “the journalist who has provided the most insightful and original coverage about lending innovation and fintech.”

In 2014, he sold and exited his most successful company, Boston Technologies (BT) group. BT was a high-frequency trading and inter-broker broker-dealer in the FX Spot, precious metals, and a CFDs space company. He was the Founder and CEO, and he boot-strapped it from $0 to a $20+ million in revenue without any equity investment. BT was the #1 fastest growing company in Boston in 2011 according to the Boston Business Journal and the only company being in top 10 fastest in 2012-13 as it was #5 in 2012. BT has been on the Inc. 500/5000 list of fastest growing companies in the US for 4 years in a row. After the sale, he became Head-of-Strategy for Currency Mountain (www.currencymountain.com), a USD 100 million+ holding company focused on retail and medium institutional currencies.

Boston Business Journal has named him in the top 40 under 40 in 2012 in recognition of his business achievements.

Since 2015 he’s Founder and CEO of Lampix, a smart lamp that transforms any surface into a smart surface. Due to Lampix’s recent ICO he obtained first hand experience in that area. He’s also advisor in multiple other ICOs such as First Blood, AirFox, DropDeck and Well ICOs.
Mihai Dumitrescu

Mihai obtained a Master’s of Science in Computer Science from Friedrich Alexander Universität Erlangen-Nürnberg. His specialties include high-performance scalable software architecture & algorithms, computer vision, machine learning, deep neural networks, P2P systems and algorithms, and enterprise content management. Mihai is the Founder, CEO and CTO of rosoftlab since 2006, which is a research and development firm in computer vision, augmented reality and related mobile and web apps. Its products and services are used by clients in Germany, Switzerland and many other countries. Employing more than 30 people, rosoftlab counts among its clients Audi AG, Wacker Neuson, the leading manufacturer of construction machines and Migros, the largest retailer in Switzerland. rosoftlab's continuous research and development has led to the creation of multiple companies, such as vanillaNAV, an easy to set up indoor navigation system.

Mihai’s early experience includes working as Senior Software Engineer at CARUS srl being responsible for software architecture and database design for the development of an ERP system.

Mihai has first hand experience with blockchain, smart contracts and ICOs.

Florin Mihoc

Florin is a startup co-founder and advisor to a dozen startups and program. He was a Senior post-doc Fulbright Fellow, and a scholar at Columbia Business School in NYC for several years. He serves as a mentor at Startupbootcamp (SBC) fintech program in NYC, where he helped build the program, and advised dozens of teams on: strategic partnerships, international scaling, capital raise, business development and media strategy;

With a background in Fortune 500 biz dev, sales, strategic account management roles and M&A advisory, he holds a PhD in international marketing, and strategic (global) account management. Florin is multi-cultural and multi-lingual, a native of CEE who lived and traveled in the US. Most recently he joined the advisory board at SxSw tech festival, the largest of its kind in the world and is actively involved in several successful blockchain/crypto companies.

www.Opiria.com
Michael Mazier

Michael is a fintech executive and entrepreneur with multi-disciplinary expertise in financial markets and technology. He has 15+ years of experience as investment manager, bond trader and IT trading systems manager; and pre-Wall Street experience in aerospace engineering and artificial intelligence research. He is currently an advisor on blockchain applications and crowdsource crypto-token sales, and co-founder at LendingCalc, a peer-to-peer marketplace lending analytics firm. He previously was chief quantitative strategist at Van Eck Global, where he managed more than $4.5 billion in bond and commodity assets, and advised on hedge fund manager selection. He was also a fixed income research analyst and IT developer/manager at Morgan Stanley, head of fixed income funds research at Bank of America/Merrill Lynch and product manager at Citibank. He began his career as electrical engineer, designing hardware and software for communication satellites at GE Aerospace. Michael has an MBA from Columbia Business School, MS in Electrical Engineering from Villanova University and BS in Electrical Engineering from Syracuse University.

Legal Counsels

CANZLER & BERGMEIER

CANZLER & BERGMEIER is Opiria’s IP lawyer. CANZLER & BERGMEIER was founded more than 20 years ago. Today, it’s one of the largest patent law firms in northern Bavaria. Since 2008 they are one of the few law firms in Germany with ISO certification, in three areas (ISO 9001 - Quality Management, ISO 14001 - Environmental Management and ISO 27001 - IT Security). This ensures transparency, reliable service quality and an outstanding level of information security for their clients.

Dr. Lugert & Dr. Mueller

Dr. Mueller is Opiria’s notary. Dr. Mueller is specialized in the formation of companies, the acquisition and sale of business stakes in companies, structural changes such as capital measures or changes to the constitution or company transformations and company successions.

ETL

ETL is Opiria’s tax consultancy firm. In Germany the ETL-Group has over 840 offices and is represented worldwide in over 50 countries. In the domain of tax consultancy ETL is the market leader nationally and counts among the top 5 auditing and tax consultancy firms in Germany with a revenue about over 790 Mio. Euro. More than 7.000 employees are working in Germany for over 170.000
clients – including more than 1,400 tax consultants, lawyers, accountants, management consultants and financial service providers.

Human Resources Requirement

Opiria will require the following people in the implementation of the project. Vacancies will be published online and potential candidates will be shortlisted and selected after an interview process.

Table: Staff requirement

<table>
<thead>
<tr>
<th>Staff required</th>
<th>No. of Staff</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management and Operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO</td>
<td>1</td>
<td>Already filled</td>
</tr>
<tr>
<td>CTO</td>
<td>1</td>
<td>Already filled</td>
</tr>
<tr>
<td>COO</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>CFO</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Accountants</td>
<td>2</td>
<td>To be recruited</td>
</tr>
<tr>
<td>IT security/admin</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>HR</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Office admin</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>In-house counsel</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Software Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Manager</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Head Software Engineer</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Database</td>
<td>3</td>
<td>01 filled</td>
</tr>
<tr>
<td>Blockchain</td>
<td>2</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Backend</td>
<td>4</td>
<td>02 filled</td>
</tr>
<tr>
<td>Frontend</td>
<td>4</td>
<td>03 filled</td>
</tr>
<tr>
<td>App Development</td>
<td>8</td>
<td>04 filled</td>
</tr>
<tr>
<td>UI</td>
<td>2</td>
<td>01 filled</td>
</tr>
<tr>
<td>UX</td>
<td>2</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Machine Learning</td>
<td>3</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Testing</td>
<td>4</td>
<td>01 filled</td>
</tr>
<tr>
<td>Marketing &amp; Sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Partner Manager</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Direct Sales</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Senior Marketing</td>
<td>1</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Junior Marketing</td>
<td>2</td>
<td>To be recruited</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td></td>
</tr>
</tbody>
</table>
Financials

ICO campaign
The Sale Period will begin on Jan 8th at 8am New York time, 2018 and continue until either
(a) USD 29 million worth of Ether or Bitcoin are received for PDATA Tokens sold or Feb 8th
2018 8am New York time.

How will the PDATA tokens be priced?
We will create roughly 1.574 billion PDATA tokens.
Each token will be sold at a rate of 37000 PDATA tokens per BTC. This price may change
up until the Pre-ICO starts on November 1st 2017. This rate will be adjusted to make a
PDATA token worth $0.1 dollars (10 US cents).

What is the ICO discount schedule?
- The Pre-ICO period will end on January 7th 2018, 1 day before the ICO starts. During
  the Pre-ICO Sale Period the discount level for PDATA Tokens will be as follows:
  - $0M - $3M USD: 70% discount
  - $3M - $7M USD: 65% discount
- Day 1 of the ICO the discount will be 60%. Each day the discount will go down by 3%
down to a minimum of 0%.
- The last 10 days of the ICO there will be no more discount.

What crypto currencies will you accept during the ICO?
We will accept ETH and BTC.
The ETH payments will be accepted via a smart contract.
The BTC payments will be accepted via an escrow account. All BTC participants will receive
an ETH wallet with the PDATA tokens in it. They need to provide a contact method for this
ETH wallet information to be received back.

How will the PDATA tokens be distributed?
The following is how the coins are roughly going to be distributed:
Issued: 50% of the coins will be issued for the ICO
Reserves: 30% will be used for data purchase
Company/Team: 20% will be used for research and development

We will put 30% of the token in reserve and we are using 20% of the token for the team,
partners.
How will the team’s 20% be used?
- 25% of them will be available in the same time as for the public, roughly 1 month after the CTL.
- 25% of them will be locked for 12 months
- 25% of them will be locked for 24 months
- 25% of them will be locked for 36 months

Why are you locking them?
Because we want to demonstrate that we are in this for the long run and that the team’s incentives are aligned with the token holder’s interest.

How will the reserve be used?
The tokens set in reserve will be under the following rules:
1. 25% will be locked for 12 months
2. 25% will be locked for 24 months
3. 25% will be locked for 36 months
4. 25% will be locked for 48 months
5. At each release of tokens
   a. 30% will be used for data acquisition costs, development, marketing and other corporate needs.
   b. 50% will be allocated to acquire other companies, patent needs and IP needs
   c. 10% will be allocated to external partners, if needed
   d. 10% will be distributed to all PDATA token holders (air drop) proportionally to their then holdings in PDATA tokens.

When will PDATA coins be distributed and then sold on the secondary market?
We expect to distribute PDATA tokens 56 days post crowdsale token launch.
The company will use the ICO proceeds primarily for the development of the platform.

Use of Funds
The funds collected through the CTL will be used to cover the expenses of the project until the project starts making profits and sufficient cash flows to function on its own. Opiria is expected to make profits by 2021.
The key expenses to be met with the funds collected are given below:
- The cost of the Opiria database
- Staff salaries - software development costs:
  - apps
  - browser plug-ins
  - backend
  - frontend
- Marketing and Sales expenses
Projected Sales & Profitability

The projected sales and profitability can be found in the following table and figure. Annotation: the financial planning is was checked concerning plausibility by analyzing the overall revenue of the data brokerage and market research markets and by evaluating the annual revenue of important competitors (see also competitive landscape). The annual revenue of the data brokerage and market research market is about 250 billion. The market leader Acxiom has personal data of 250 million consumers in their database and makes an annual revenue of 1+ billion USD.

Table: Performa Profit and Loss Accounts for the 2018-2023 period (USD)
## Revenue vs. net profit (2018-2023)

![Graph: Revenue vs. net profit (2018-2023)](image)

### The Milestones Plan

**Table: Key milestones in the Opiria project implementation**

<table>
<thead>
<tr>
<th>#</th>
<th>Timeframe</th>
<th>Milestone</th>
</tr>
</thead>
</table>

www.Opiria.com
<table>
<thead>
<tr>
<th>No</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2018 January</td>
<td>Crowdsale of PDATA Tokens</td>
</tr>
<tr>
<td>2</td>
<td>2018 February</td>
<td>Recruitment of required staff</td>
</tr>
<tr>
<td>3</td>
<td>2018 June</td>
<td>Release of Opria 2.0</td>
</tr>
<tr>
<td>4</td>
<td>2019 February</td>
<td>Completion of Opria and PDATA ecosystem</td>
</tr>
<tr>
<td>5</td>
<td>2020 December</td>
<td>10 million consumers in Opria database</td>
</tr>
<tr>
<td>6</td>
<td>2021 December</td>
<td>50 million consumers in Opria database</td>
</tr>
<tr>
<td>7</td>
<td>2022 December</td>
<td>125 million consumers in Opria database</td>
</tr>
<tr>
<td>8</td>
<td>2023 December</td>
<td>250 million consumers in Opria database</td>
</tr>
</tbody>
</table>

Frequently asked questions

Risks and Disclosures

Regulatory Risks

**Currency Regulation Risks**
Governments are still grappling with public policy on the regulation of crypto-currencies as a form of settlement in trade. Governments adverse to the proliferation of the use of crypto-currencies in local commerce could issue laws and regulations deeming the use of crypto-currencies a regulated activity. In recent weeks, countries such as China and Korea have issued regulations or statements prohibiting token sales, while other countries have sought to bring the sale of tokens within the regulator control of securities offerings. This could result in holders of PDATA Coins being unable to use their PDATA Coins in the future without further regulatory compliance by PDATA Coin.

**Risks Associated With Use of PDATA Network**
Use of crypto-currency exchanges are complex and subject to stringent qualification requirements. There is no guarantee that the developers will be able to successfully create a system that allows payment for services using global crypto-currencies. The failure to establish a network will result in decreased liquidity of the PDATA Coin as a form of settlement currency within the PDATA Network.

**Risks Associated With CrowdSale/Token Sale**
PDATA Coins are not investment products. Rather, PDATA Coins serve a specific function within the PDATA system, which is the means to access and purchase personal data. Without PDATA Coin, the general public may not access the PDATA system. There is also no expectation of future profit or gain from the acquisition of PDATA Coin. For these and other reasons, we believe the sale of PDATA Coin does not constitute a public offering of
securities subject to prospectus registration requirements. However, public policy towards token sales is changing, and it is conceivable that regulators may in the future seek to broaden the scope of regulation of token sales. This could make token sales subject to registration requirements in the United States and similar jurisdictions. If the PDATA Coin token sale becomes subject to registration requirements, this would delay or potentially postpone the proposed PDATA Coin token sale indefinitely.

**Taxation Risks**
The use of PDATA Coin tokens as a form of settlement currency may or may not be subject to local income tax, capital gain taxes, VAT or other forms of taxes. This uncertainty in tax legislation may expose merchants and customers alike to unforeseen future tax consequences associated with the use of PDATA Coin as a settlement currency, and /or the trading of tokens or PDATA Coin for capital gains.

**Capital Control Risks**
Many jurisdictions, such as China impose strict controls on the cross-border flow of capital. Holders of PDATA Coins may be subject to these regulations and /or arbitrary enforcement of such regulations at any time. This would make the transfer of PDATA Coins out of the local jurisdiction to overseas exchanges an unlawful activity exposing the user of PDATA Coins to government fines or other regulatory sanction.

**CTF and Anti-Money Laundering Regulations**
The United States has issued a series of regulations to combat terrorist financing (CTF) and money-laundering activities. Many other countries have enacted similar legislation to control the flow of capital for such illicit activities. The use of crypto-currencies by bad actors would breach such regulations. Any illicit use of the PDATA Coin could seriously impact the global reputation of the PDATA Network. In such event, it is not inconceivable that this could trigger scrutiny by CTF and anti-money laundering regulators and potentially cause significant disruption to the distribution and circulation of tokens and PDATA Coin in the PDATA ecosystem.

**Blockchain Risks**
On the Ethereum blockchain, timing of block production is determined by proof of work so block production can occur at random times. For example, ETH contributed to the PDATA Distribution Contract in the final seconds of a distribution period may not get included for that period. Buyer acknowledges and understands that the Ethereum blockchain may not include the Buyer’s transaction at the time Buyer expects and Buyer may not receive PDATA Coin tokens the same day Buyer sends ETH. The Ethereum blockchain is prone to periodic congestion during which transactions can be delayed or lost. Individuals may also intentionally spam the Ethereum network in an attempt to gain an advantage in purchasing cryptographic tokens. Buyer acknowledges and understands that Ethereum block producers may not include Buyer’s transaction when Buyer wants or Buyer’s transaction may not be included at all. PDATA Coin tokens may be subject to expropriation and or/theft. Hackers or other malicious groups or organizations may attempt to interfere with the PDATA Distribution Contract or the PDATA Coin tokens in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, because the Ethereum platform rests on open source software
and PDATA Coin tokens are based on open source software, there is the risk that Ethereum smart contracts may contain intentional or unintentional bugs or weaknesses which may negatively affect the PDATA Coin tokens or result in the loss of Buyer’s PDATA Coin tokens, the loss of Buyer’s ability to access or control Buyer’s PDATA Coin tokens or the loss of ETH in Buyer’s account. In the event of such a software bug or weakness, there may be no remedy and holders of PDATA Coin tokens are not guaranteed any remedy, refund or compensation. The Project and all of the matters set forth in the White Paper are new and untested. The Project might not be capable of completion, implementation or adoption. It is possible that no blockchain utilizing the Project will ever be launched and there may never be an operational platform. Even if the Project is completed, implemented and adopted, it might not function as intended, and any tokens associated with a blockchain adopting the Project may not have functionality that is desirable or valuable. Also, technology is changing rapidly, so the PDATA Coin tokens and the Project may become outdated. The regulatory status of cryptographic tokens, digital assets and blockchain technology is unclear or unsettled in many jurisdictions. It is difficult to predict how or whether governmental authorities will regulate such technologies. It is likewise difficult to predict how or whether any governmental authority may make changes to existing laws, regulations and/or rules that will affect cryptographic tokens, digital assets, blockchain technology and its applications. Such changes could negatively impact PDATA Coin tokens in various ways, including, for example, through a determination that PDATA Coin tokens are regulated financial instruments that require registration. Company may cease the distribution of PDATA Coin tokens, the development of the Project or cease operations in a jurisdiction in the event that governmental actions make it unlawful or commercially undesirable to continue to do so.

**Business Risks**

The Company plans to conduct closings of sales of PDATA Coin tokens as funds are received. If less than $1,000,000 is received from the sale of PDATA Coin Tokens, the Company may have insufficient cash to implement its plans as described below, and PDATA Coin purchasers who purchased the Tokens shall be at heightened risk of loss from their investments. The Company’s principal competitors may have greater financial resources than those available to the Company and thus be in a better position to attract talent, initiate projects and offer lower prices for electricity which is a crucial factor for miners of bitcoin. The Company’s ability to remain competitive may depend in part upon its ability to develop new and enhanced products or services and to introduce these products or services in a timely and cost-effective manner. In addition, product and service introductions or enhancements by the Company’s competitors or the use of other technologies could cause a decline in sales or loss of market acceptance of the Company’s existing products and services. There can be no assurances that the Company shall be successful in selecting, developing, and marketing new products and services or in enhancing its existing products or services. Failure to do so successfully may adversely affect the Company’s business, financial condition and results of operations. The Company’s ability to realize its objectives shall be dependent on its ability to attract and retain additional, qualified personnel. Competition for such personnel can be intense, and there can be no assurance that the Company’s results shall not be adversely affected by difficulty in attracting and /or retaining
qualified personnel. The industry in which Company operates is new, and may be subject to heightened oversight and scrutiny, including investigations or enforcement actions. There can be no assurance that governmental authorities will not examine the operations of Company and/or pursue enforcement actions against Company. Such governmental activities may or may not be the result of targeting Company in particular. All of this may subject Company to judgments, settlements, fines or penalties, or cause Company to restructure its operations and activities or to cease offering certain products or services, all of which could harm Company’s reputation or lead to higher operational costs, which may in turn have a material adverse effect on the PDATA Coin tokens and/or the development of the Project.