Profila Zero Knowledge Token Crypto-Asset

Whitepaper

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Cardano native token

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LEGAL STATEMENTS

Profila GmbH as the issuer of the crypto-asset called Zero Knowledge Token or abbreviated "ZKT" ($ZEKE) is solely responsible for the content of this crypto-asset white paper. This crypto-asset white paper has not been reviewed or approved by any competent authority in Switzerland, in any of the member states of the European Union, or otherwise.[1]

The Board of Directors of Profila GmbH, acting as the management body of the main issuer of the tokens, hereby confirms that the Profila Whitepaper contains all the relevant information that is known to the company at the time of the , including all the required information set out in article 5 ("content and form of the crypto-asset white paper") and Annex I of the draft proposal of the Markets in Crypto-Asset or MICA Directive, and has been drafted in accordance with the principles set out in article 13 of the proposed MICA Directive ("honesty, fairness, professionalism") in a fair, clear and not misleading manner, thereby taking the best interest of the holders in mind.

We confirm the information presented in the Profila Whitepaper is correct and that there is no significant omission of important information.

We confirm that Profila GmbH appointed a financial intermediary to receive the funds during the ZKT token Sale according to art. 24 AMLA.

If you have any question in relation to the Profila ZKT Sale which are not answered by this paper, please contact us via the different channels available to you (see our webpage. https://ico.profila.com).

Please see in Annex I to the Whitepaper the signed meeting notes of the Board of Directors

SUMMARY WITH KEY INFORMATION ABOUT THE OFFER [2]

Please read this summary carefully and take note that:

(a)   this summary should be read as an introduction to the Profila Whitepaper;

(b)   you, as a prospective purchaser should base any decision to purchase a crypto-asset such as the ZKT token on the content of the Profila Whitepaper;

(c)   the offer to the public of crypto-assets such as the ZKT token does not constitute an offer or solicitation to sell financial instruments and that any such offer or solicitation to sell financial instruments can be made only by means of a prospectus or other offering documents pursuant to national laws;

(d)   the Profila Whitepaper does not constitute a prospectus as referred to in Regulation (EU) 2017/1129 or another offering document pursuant to Union legislation or national laws of another jurisdiction.

Profila is a Swiss-based limited liability company founded in 2015 and fully operational since 2017, actively researching and building a privacy-preserving alternative to third party cookies, under the name "Zero Knowledge Advertising" (ZKA), and developing a new era customer data, engagement, and decentralized marketing (DeMar) platform on the Cardano blockchain.

ZKA is an advertising ecosystem where no personal data from an internet user browsing the web is shared with third parties (advertisers, publishers etc.), but where the individual still receives relevant ads anonymously. DeMar

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[1]Statement in accordance with article 5.4 of the Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-Assets, and Emending Directive (EU) 2019/1937 (hereafter the **"Proposed MICA Directive"**).
[2]Summary with key information as required in accordance with article 5.7 of the Proposed MICA Directive.

or decentralized marketing consumers will have a greater control over their data and the ads they see, and most importantly, they will be able to directly connect with brands that matter to them, without passing by the numerous intermediaries in today's advertising ecosystem.

As part of its ZKA/DeMar strategy, Profila created a blockchain-based token – called Zero Knowledge Token (ZKT) – which will incentivize people to use the Profila platform, enables people to control how Brands use your personal information, and to get compensated for viewing their content. It will also function in the ZKA system and will reward internet users for helping keep their identities (IP addresses) anonymous (through peer-to-peer technologies) and will help to identify and reduce Ad fraud (through audit trails) and the misuse of personal data online by businesses.

Profila is offering an amount of ZKT for Sale to the public for purchase.

Profila's ZKT has a variety of functions that have been thoroughly researched as part of several international joint research projects (Carlos III University of Madrid; Luzern University of Applied Sciences), and that are already being developed as part of our funded blockchain projects by the Cardano community (a first project under Project Catalyst, fund 5, three additional proposals received funding by the Cardano community under fund 6, and our ZKT token use case described in this Whitepaper received funding under Project Catalyst fund 7, see our "Project Catalyst" articles on Medium for more information, here).

Profila is confident about its unique blockchain and token functionalities, the capacity to deliver and further build out its privacy-preserving and consumer-first data, customer engagement and decentralized marketing solution by its multidisciplinary and engaged team, and the strength of its existing research and technology partnerships.

The ZKT Sale as explained in this Whitepaper concerns an offer of crypto-assets to the public as covered by the Proposed MICA Directive.

The ZKT token is a Cardano native token.

The ZKT Sale started on 29 November 2021 (start pre-seed round) and consists of 4 separate rounds, namely a pre-seed round (until 28 February 2022), a seed round and private round (until 31 March 2022), and a public round. The public round is foreseen to take place in April 2022. However, this is subject to change based on many elements such as market conditions, development progress, private round progress etc.

From the 500.000.000 ZKT that have been created by Profila on 22 november 2021 (**"ZKT Creation Date"**), a maximum of 28% will be offered to the public during the token sale; 23% will be allocated to a user incentive pool which will incentivize Profila users for certain activities on the platform and within the ecosystem; 15% will be allocated to the team and existing shareholders; and 8% will be reserved for service providers and advisors.

The price of 1 ZKT will be 0.075 USD during the public round, 0.045 USD during the early backers round, and 0.10 during the private round. The soft cap for the ZKT Sale is 1.500.000 USD, namely the minimum amount required to successfully build out the "core" project scope as explained in this Whitepaper (**"Soft Cap"**). The target raised for the ZKT Sale is 5.080.000 USD (**"Target Raise"**). The hard cap will be 5.475.000 USD (**"Hard Cap"**).

Profila's main competitors are set out in section 9 of the Whitepaper, where our Zero Knowledge Advertising strategy is competing with other privacy-preserving cookie replacements such as Google Floc, Brave and PIMs.

For a detailed overview of all the risks related to the offer of ZKT to the public, please see section 10 of the Whitepaper.

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01. GENERAL COMPANY INFORMATION

1.1 Company

The Profila Zero Knowledge Token (ZKA) sale (hereinafter the "Profila ICO") is organized by Profila GmbH and Profila Europe B.V and focuses mainly on the European market (including Switzerland).

PROFILA GMBH, a private limited liability company organized and existing under the laws of Switzerland, with registered office at Seeburgstrasse 45, 6006 Lucerne, Switzerland, founded on 17 August 2015 and registered with commercial register of the Canton of Lucerne under number CHE 498.045.399, hereby duly represented by Luke Bragg in his capacity of managing director (hereinafter referred to as the "**Company**" or "**Profila**"). Profila is the issuer of the tokens.

Profila is 100% owner of an affiliate in Europe, named **PROFILA EUROPE BV**, a limited company organized and existing under the laws of Belgium, with registered address at Avenue de Roodebeek 213, 1030 Brussels, Belgium, founded on 18 May 2017 and registered with the Belgian crossroad bank for enterprises under company number 0675.820.774, duly represented by MVR Legal BV, the management company of Profila co-founder Michiel Van Roey (hereinafter referred to as the "**Profila Europe**").

1.2 Profila Management Body – Board of Directors

Please find below the identity, address, and functions of the management body:

SHAWN BOONE JENSEN, South-African citizen, born on 13 November 1972 having his domicile in 23 King Street, Hout Bay, 7806, Cape Town, South Africa, co-founder of Profila, exercising his function as chairman of the board of directors and CEO of Profila.

MVR LEGAL BV, a private limited liability company registered under the laws of Belgium, with registered address at Avenue de Roodebeek 213 (1), 1030 Brussels, Belgium and registered with the Belgian crossroad bank for enterprises under company number 0727.696.077, exercising a function as board member and secretary of the board of directors of Profila, as well as administrator of Profila Europe; duly represented by **MICHIEL VAN ROEY**, Belgian citizen, born on 15 September 1989 in Wilrijk, Belgium, having his domicile at Avenue de Roodebeek 213 (1), 1030 Brussels, Belgium, co-founder, and general counsel of Profila.

ALABASTRE LABS GMBH, a private limited liability company organized and existing under the laws of Switzerland, with registered office at Seeburgstrasse 45, 6006 Luzern, Lucerne, Switzerland, registered with commercial register of the Canton of Lucerne under number CHE-222.667.751, hereby duly represented by **LUKE BRAGG**, United States citizen, having his domicile at Seeburgstrasse 45, 6006 Luzern, Switzerland, co-founder, and chief product officer of Profila.

PHILIP LAMS Belgian citizen, having his domicile in Nachtegalenlei 49, 2900 Schoten, Belgium, exercising a function as board member of the board of directors.

Core team

Founders

Shawn Jensen
SWITZERLAND

Co-Founder & CEO
Telco product, architecture & customer service with 20+ years XP in senior management role in ISP's, SI and global Telco organizations. See LinkedIn.

Michiel Van Roey
BELGIUM

Co-Founder & General Counsel
10 years XP as EU-qualified business lawyer in international law firms, CERN, Cisco. Specialized in tech & and privacy law; author crypto-asset regulations (see here). See LinkedIn.

Luke Bragg
SWITZERLAND

Co-Founder, Chief Strategy & Product Officer
Digital marketing, architecture, ecosystem design. 20 years XP designing creative digital solutions for complex organizations (G7; Akzo Nobel; Merck/MSD). See LinkedIn.

COs

Ipek Sahiner
SWITZERLAND

Chief Operations Officer
Telco engineering & project management Computer Engineer with 20 years XP as computer engineer and project manager in the telecom sector at Nokia, supporting local Swiss and global network operators. See LinkedIn.

Michael Rava
SWITZERLAND

Chief Marketing Officer
Serial entrepreneur, founder, technologist, networker. high-end networker with over 30 years of business experience as entrepreneur. See LinkedIn.

Rajasekaran Yogaraja
SWITZERLAND

Chief Technology Officer
Technologist, blockchain, developer/engineer. 15 years XP as software developed and serial entrepreneur, with experience in blockchain - based business models and e -commerce platforms. See LinkedIn.

Illustration 1

1.3 Profila Leadership Team

Please find below more information on the identity of the Profila leadership team, including information about their functions in Profila, as well as relevant past experiences that ensure they can effectively exercise their functions and responsibility.

SHAWN BOONE JENSEN

(CEO)
Shawn, South African national, is the founder of Profila GmbH. Shawn's passion for online privacy and personal data management started in 2006 and through his career in ISP's, SI's and global Telco organizations he realized the challenges enterprise and consumers face in managing the value and privacy of their data. Since 2016 Shawn has been investigating the market needs with customers and investors, molding a unique and globally applicable approach to privacy and data sharing whilst building a talented team to launch Profila in 2018. Before Profila, Shawn delivered in numerous senior management roles in Vodafone Global Enterprise (VGE), most recently as the Head of Product - Connectivity and the Head of Customer Presales and Service Middle East and Africa. See LinkedIn.

MICHIEL VAN ROEY

(Chief Legal Officer)
Michiel, Belgian national, is Profila's general counsel, privacy and crypto expert. Michiel is an EU-qualified business lawyer with almost 10 years PQE as Tech/IP lawyer in international law firms, advising clients on a variety of technology, intellectual property, and privacy issues, including issues relating to the protection of personal data (including GDPR), cybersecurity, direct marketing, ecommerce, consumer rights, & online advertising. Michiel also worked as technology lawyer in an international organization (European Center for Nuclear Research; CERN), and a multinational company (Cisco). Michiel published several articles about crypto-asset regulations, including his chapter in the Virtual Currency Regulation Law Review (see here [4]). Michiel is well placed to oversee Profila's activities as general & privacy counsel. See LinkedIn.

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LUKE BRAGG

(Chief Product Officer)

Luke, US Citizen and currently Swiss resident, spent his career developing creative digital solutions for complex and demanding organizations in both the public and private sector (G7 organization in Russia; leading the digital strategy for Akzo Nobel in the Netherlands; Director of Enterprise Architecture for Merck/MSD in Switzerland) and later started his own firm to work with organizations to make their business strategy actionable through digital channels and improved models of customer engagement. Since 2018, Luke is responsible for developing and implementing Profila's vision for its product and services. Luke's experience with digital product development in an international environment, combined with an interest in the political economy of privacy and trust, make him ideal to drive Profila's product strategy.
See LinkedIn.

IPEK SAHINER

(Chief Operations Officer)

Ipek, a Swiss and Turkish citizen, is a Computer Engineer with 20 years' experience. She worked as Engineer and Project Manager mainly in the Telecommunications sector on several products for several customers in different countries. She began her telecommunications career in Turkey in Nokia and had the chance to work and travel in many countries before moving to Switzerland. She continued to work for Nokia in Switzerland supporting local Swiss and global network operators. After completing MTEC master and Product Management Professional certification, she decided to support Profila focusing on Product operations, Business operations and Business processes. See LinkedIn.

MICHAEL RAVA

(Chief Marketing Officer)

Michael is an entrepreneur, influencer, consultant, advisor, investor, full-stack marketer, brand and retail expert, social media visionary, keynote speaker, and digital ethic warrior. As a high-end networker with over 30 years of business experience, his success is fueled by the strength of his relationships, the depth of his network – over 2+ million datasets in his CRM – and his authentic desire to bring people and businesses together. He works – and lives – by "The Mastermind Principle", which consists of an alliance of two or more minds working in perfect harmony for the attainment of a common definite objective. Success does not come without the cooperation of others. Michael's network and marketing expertise make his well-placed to oversee Profila's marketing efforts. See LinkedIn.

REMY MERCKX

(Chief Growth Officer)

Rémy has more than 23 years of knowledge and experience in the Travel & Hospitality Industry, with a focus on digital, distribution, marketing, branding, driven by results, business development and customer first competencies. Before joining Profila, Rémy worked as senior vice-president – global digital & marketing – for Radisson Hotel Group. Rémy's industry knowledge and network makes him very well suited to oversee Profila's sales team and growth strategy. See LinkedIn.

RAJASEKARAN YOGARAJAH

(Chief Technology Officer)

A self-confessed techie, Raja has implemented wildly successful blockchain-based business models and e-commerce platforms. Being the serial entrepreneur, Raja constantly stays abreast with the very latest developments in the IT world, often putting his experience and expertise in the field to good use in staying ahead of the curve. His vast repertoire of programming languages and software development skills are complemented by his communication and people skills. When not exploring the vast Swiss Alps or being buried in a journal, he is on the lookout for new avenues to venture into and working towards making the world a better place, one success story at a time. See LinkedIn.

1.4 Profila Advisors

Please find below more information on the identity of the Profila advisory and extended team:

Extended team

Advisors

Remy Merckx
BELGIUM
Marketing & digital advisor in hospitality, travel & leisure, heading sales advisory and channel partnerships. See LinkedIn.

Clara-Ann Gordon
SWITZERLAND
Legal advisor to Profila in data protection, privacy and technology. partner at Niederer Kraft Frey (NKF; Zürich). See LinkedIn.

Jose Henriques
PORTUGAL
Marketing and business advisor to Profila. CMO, CEO in marketing industry. See LinkedIn.

Philip Lams
BELGIUM
Sales & business advisor to Profila. serial entrepreneur, CEO . See LinkedIn.

Mikko Kotila
FINLAND
AdTech guru, advisor in privacy, advertising and advisor to World federation of advertisers. See LinkedIn.

Elie Auvray
FRANCE
Product strategy & delivery advisor, CEO, privacy-tech evangelist, silicon valley exit. See LinkedIn.

Bullish Dumpling
UK, CHINA
Cardano Community ambassador and interviewer, with 5000+ highly relevant cardano followers, known for interviewing Cardano Foundation CEO (Frederik Gregaard) and IOG CEO (Charles Hoskinson). See Twitter.

Project Managers

Ioana Nasture
Onboarding PM. See Linkedin.

Mitchell Goodie
Community PM. See Linkedin.

Julia Haus
R&D and overall PM. See Linkedin.

Community Managers

Riyad Islam
Asian-region CM. See Linkedin.

Adrian Valdez
USA-region CM. See Linkedin.

Apoorv Singh
Asia-region PM. See Linkedin.

7x Developers
Near-shore contracted under CTO. Web, App, Backend, DB, design for normal platform environment. Specific resources for Haskell, Plutus (pioneer programs) for Cardano integration. Converting to in-house post token sale and engagements with M labs and Gimbalabs (Cardano dev. Powerhouses).

BULLISH DUMPLING,
Cardano Community ambassador and interviewer, with 5000+ highly relevant cardano followers, known for interviewing Cardano Foundation CEO (Frederik Gregaard) and IOG CEO (Charles Hoskinson). See Twitter.

CLARA-ANN GORDON
a Swiss national and partner with Niederer Kraft Frey (NKF; Zurich). She heads the NKF privacy department and has received numerous mentions and award as a privacy expert. Clara-Ann is a direct advisor to Profila's board and to Michiel Van Roey, Profila's general counsel and privacy expert. See LinkedIn.

ELIE AUVRAY
a French national and seasoned software entrepreneur (20+ years' experience), currently co-President and co-Founder of logion, a public blockchain network owned by legal officers that aims to provide a trust foundation for the decentralized economy. Elie previously co-founded and led as CEO the company Jahia Solutions Group SA. Elie is a direct advisor and blockchain subject matter expert to Profila's board. See LinkedIn.

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MIKKO KOTILA
a Finnish national, software developer and ad-tech industry expert, who worked on artificial intelligence since 2004, with a focus on both fundamental research and open-source code development. Mikko advises the World Federation of Advertisers (WFA) and is also a close technology advisor to Profila's board. See LinkedIn.

PHILIP LAMS
Belgian national and entrepreneur, managing director of Nilan Belgium with 10-year experience in business operations. Philip is part of Profila's board and works with Profila's sales team as advisor. See LinkedIn.

JOSÉ HENRIQUES
Portuguese national, investor and strategic advisor. Experienced executive with a demonstrated history of working in the telecommunications industry. José is skilled in Marketing Management, Business Planning, E-commerce, Mobile Communications, and Entrepreneurship, with a post-Grad focused on Management from Texas Tech University, USA. See LinkedIn.

1.5 Development company – Canned Soul Productions GmbH

The development of the Profila App and Brand Dashboard (as defined below), as well as the current public offering of the Zero Knowledge Token (ZKT) is led by our CTO, who is responsible for the development team from our development company Canned Soul Productions GmbH.

1.6 AML/KYC provider – Altcoinomy SA

Altcoinomy SA, a Swiss supervised financial intermediary providing AML/KYC services to Profila as part of the public offer of tokens. Altcoinomy SA is affiliated with VQF, a financial self-regulatory organization (SRO) specialized in supervising companies active in the fintech industry.

1.7 Conflicts of interest

There are no conflicts of interest with Profila, Profila Europe, its board, the leadership team, its advisors, and the public offering of the Zero Knowledge Token (ZKT).

02. INDUSTRY PROBLEM STATEMENT

2.1 Today's privacy problem – brands control how your data is used

Today, you have no control over the collection and use of your personal data online. Companies have (collected) your personal data, and they decide – at their own discretion – how they (mis)use your personal data for their benefit.

You interact with digital services and purchase products from companies or "brands[5]" globally. With each interaction you directly share personal data which is used for a certain purpose (e.g., offering you a product and servicing you as a customer). You (must) agree to share your personal data – in most cases – without knowing how a brand will use it.

In principle, each time your personal data is collected or used by a brand, you are shown a privacy policy or cookie policy which you are forced to accept. Thereby, you agree to share your personal data, without knowing how these Brands will use it. These legal documents are difficult (sometimes even impossible) to understand, and this is often deliberate.

But what can you do if a brand uses your data against your will, and how do you keep track of all these legal terms that govern a brands' use of your personal data?

> **For example:** you made an online Wholefoods-account to order groceries, but you now get 15 newsletters/week, even emails from companies like Trader Joe's, with whom you never shared your personal data. You have no idea what you agreed to in a privacy policy with Wholefoods, and you do not know why similar companies are contacting you for products you bought from Wholefoods. Was Wholefoods allowed to share your data with other companies? Did they explain this in their privacy policy?

Today, you have no control over how brands use of your personal data. It is entirely the Brand that decides (i) when to contact you, (ii) via which channel, and (iii) the content you receive. That is largely because people lack the tools to give brands clear instructions about the frequency of interaction, the channel of preference, and the content

of choice. There is a clear need to level the playing field, to bring people on the same level of technical maturity as brands, to make this exchange of information and content consumer-consenting, and two-directional.

2.2 Today's privacy problem – online advertising (Ad-Tech)

A large part of the time you spend online (social media and websites), you are being subjected to online advertising. The Ad-Tech market touches billions of consumers [we call them "people"!] and it is reliant on collecting and sharing a large amount of people's personal data. Therefore, today's privacy problem is even more apparent in the online advertisement space (Ad-Tech industry), where your personal data – along with the data of billions of other internet users – gets shared with and used by numerous companies (unknown to you) for their benefit.

Even though the different stakeholders in the AdTech industry are aware of this privacy abuse, they continue to use it for their benefit. There are several reasons that explain this behavior:

(a) It's a Billion dollar industry

Why would some brands and publishers misuse your data? This is explained by the money involved. Online advertising is a lucrative business, valued at USD 334 billion in 2019, USD 378 billion in 2020 and is expected to reach USD 982.82 billion by 2025.[6] This model is entirely based on collecting as much personal data about you and increasing your screen-time. Every second and click (literally) counts. What is being bought and sold by brands, ad agencies and social media companies, is your attention, at a cost-per-view (CPM, per 1000 views) or cost-per-click (CPC) rate (namely each time you click an ad). For example, Facebook's average CPC is approx. USD 1.72 worldwide; and each user clicks (on avg.) on 12 ads per month. In USA/Canada, Facebook's has an avg. revenue per user around USD 163.86/year.[7] Today, none of that is shared with the actual people whose personal data is being (ab)used.

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[3]"brand" could mean an individual, corporation, partnership, joint venture, limited liability company, governmental authority, unincorporated organization, trust, association, or other entity, that offers or promotes products and/or services, or – in the case of individual that can be qualified as a "Brand" (e.g., influencers, celebrities, politicians, independent professionals) – promotes him or herself, in a physical or digital environment at any worldwide location.

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(b) It allows for personalization (although not privacy compliant)

The online advertising ecosystem offers a clear advantage over traditional advertising channels like TV, press or radio stations: personalization. People's online activity can be tracked and afterwards processed to obtain a profile of each individual, which reveals their preferences and interests. Conceptually, this is a good idea, because knowing the interests of someone allows platforms and brands to show them ads and content that interests them. However, the obsession for personalization has led to the development of a sophisticated tracking ecosystem mainly motivated by the advertising industry. This ecosystem goes further than the online activity of people and with the proliferation of smartphones allows platforms to also track the physical movement and places visited by an individual.

In order to present you with the best add at the right time – in order to maximize the chances that you buy a product or service displayed in the add –, social media or ad companies need to sell your attention to the highest bidding business/organization [we call them "Brands"]. They therefore collect a large amount of personal data about you, in order to present Brands with the best possible picture of who you are and what you like. Some of this data is collected directly from you, whereas other information is collected via cookies or other third parties. Most people are not aware of how much data is shared with how many Brands, and how they use it.

(c) What alternative do you have?

Many e-commerce businesses (especially small local ones) use Online Advertising because they do not have any other option. Today if a brand wants to have an online presence, there is no other alternative than using the advertising services that Facebook, Instagram and Google provide, even though your brand is then participating to and even financing this large-scale personal data abuse.

(d) However, opposition is there, and change is coming

This sophisticated tracking ecosystem has led to scandals that have motivated a reaction by people as well as public administrations. As explained below, recent privacy laws are making it more and more difficult for the Ad-tech industry to continue its current course, and alternative technologies are emerging to replace third party tracking cookies. In addition, despite the described tracking ecosystem, online advertising stakeholders still largely fail to show people ads of real interest. The result is that many people consider online ads to be annoying and useless, which along with the perception of privacy intrusion has led people to massively install ad blocker solutions.

2.3 Privacy laws around the world – a first step in the right direction

Rapid technological developments and globalization has presented new challenges to the protection of personal data. The scale of the collection and sharing of personal data has increased significantly. Technology allows both private companies and public authorities to make use of personal data on an unprecedented scale in order to pursue their activities.[8] These new developments, in addition to numerous scandals related to privacy violations, have led some administrations to develop modern data protection legislations that consider illegal many of the practices conducted in the past (and still ongoing today) by (i) (some) brands – in their B2C relationship and communication with customers as explained in 2.1 above – and (ii) by online advertising stakeholders in the AdTech industry – in their advertising practices as explained in 2.2 above.

These privacy laws provide a significant level of privacy guarantees to people, and obligations on brands that process people's personal data. Examples of these laws are the General Data Protection Regulation (GDPR) in the EU[9]; the California Consumer Privacy Act (CCPA) in California[10]; the Brazilian Data Protection Law (LGPD) in Brazil[11]; Protection of Personal Information Act (POPI) in South-Africa[12] and many more.

These privacy laws set out uniform rules that relate to the processing of personal data from individuals by organizations [which – again – we refer to as "brands"]. Most of these legal efforts include similar principles and objectives, putting in place requirements for brands for properly handling personal data, and rights for individuals (often called "data subjects", but we refer to "people") whose data is being collected and processed.

Two recurring concepts we can find in most of these privacy laws – and which are relevant for our project as explained in this whitepaper – are the "transparency and information requirement" and "data subject rights".

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[6] See recital 6 and 7 of the General Data Protection Regulation (Regulation (EU) 2016/679) ('GDPR'), available via https://eur-lex.europa.eu/eli/reg/2016/679/oj.
[7] General Data Protection Regulation (Regulation (EU) 2016/679) ('GDPR'), available via https://eur-lex.europa.eu/eli/reg/2016/679/oj.
[8] CCPA or California Consumer Privacy Act of 2018, SB 1121, available via https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1121.
[9] For an English translation of the LGDP is made available in the IAPP website, see https://iapp.org/resources/article/brazilian-data-protection-law-lgpd-english-translation/.
[10] Protection of Personal Information Act (POPI Act), available via https://popia.co.za/.

(a) Transparency and information requirements

The principle of transparency requires brands to provide clear, precise, and easily accessible information to people about how their personal data will be used. This mean that information addressed to the public or to the data subject (you) must be concise, easily accessible, and easy to understand, in clear and plain language and, additionally, where appropriate, by using visualization[13].

In addition, brands have an information requirement when collecting personal data from a data subject [an individual]. Each brand needs to provide the data subject (you) it collects information from, with relevant information about several topics that helps you to understand more about how your personal data is being used.

E.g., a brand must give its consumers access to:
- the specific purpose of the processing (the "Why?").
- the duration of the processing (the "How long?").
- the identity of the controller (the brand itself or another entity that decides the means and purpose of collecting your data) (the "Who is responsible for your collected data?"); and
- the data subjects' rights (rights of individuals in relation to their data) (the "What can you ask a brand to do (differently)?").

These requirements increase a brand's obligations to inform its customers (you) in a clear manner about how data is being collected, how data is being used, how long it is being stored, which third parties have access to it, etc. Although the principles are a welcome step into the right direction, the execution of it by many brands today is lacking. Brands often consider that their transparency and information requirements are met by including legally difficult wording into a privacy notice (accompanying an email) or a privacy policy on their website. Many companies get away with this, but regulators and privacy authorities have started to crack down on the bigger violators.

As recent as September 2021, WhatsApp was fined 225 million EUR exactly for failing to meet this transparency requirement. The Irish Data Protection Commission (DPC) enquiry considered whether WhatsApp fulfils transparency obligations to both users and non-users of its service (WhatsApp may, for example, upload the phone numbers of non-users if a user agrees to it ingesting their phone book which contains other people's personal data); as well as looking at the transparency the platform offers over its sharing of data with its parent entity Facebook. The DPC found a range of transparency infringements by WhatsApp, issued a sizeable financial penalty, and ordered WhatsApp to take several actions to improve the level of transparency it offers users and non-users — giving the tech giant a three-month deadline for making all the ordered changes.

In addition, most consumers (maybe you) do not read or understand these policies. A study conducted by the law firm Linklaters on the number of website visitors vs. visitors of the website's privacy policy, shows that few people read privacy policies.[14] For example, 74 million people visited Channel 4's website last year but only one in every 2,500 bothered to look at the privacy notice. Worse is the British Library, where only one in 14,000 looked at their privacy policy. From these limited privacy notice visitors, data shows visitors spend on average, 90 seconds reviewing these privacy policies. That gives you a "budget" of 450 words (at average reading speed). However, the privacy polices currently average over 1,600 words, with the median length of privacy policies around 2500 word (or 10 minutes reading time). For 1462 websites you visit on average each year, that would be 76 days of reading[15].

In addition, what this shows – again – is that the flow of information (from a brand to you, an individual consumer) and the interaction between a brand and an individual consumer (you) are one-directional. Even if consumers would understand the information that is sent to them, there is not much room for a response or a dialogue. What if you do not agree with certain aspects in a privacy policy? What if you consider that a brand shouldn't know your home address when offering you (only) a digital service? Again, there are no tools available to level the playing field between brands and people. There must be a better way for brands to communicate with people, don't you think?

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[11] Recital 58 of the GDPR.
[12] "Does anyone read privacy notices? The facts", see https://www.linklaters.com/en/insights/blogs/digilinks/does-anyone-read-privacy-notices-the-facts.
[13] "Reading the Privacy Policies You Encounter in a Year Would Take 76 Work Days", see https://www.theatlantic.com/technology/archive/2012/03/reading-the-privacy-policies-you-encounter-in-a-year-would-take-76-work-days/253851/

Profila

(b) Data subject rights

People – or "data subjects" (you) in the framework of privacy laws – have certain rights in relation to their personal data, called "data subject rights" (short DSRs). Under certain conditions, these rights can be enforced against brands that process personal data.

These rights[16] may include e.g.:

- the right to information - the right to be informed about how a brand uses your personal data.

- the right to access – the right to ask for access to personal data that is being processed by a brand (e.g., when you want to know just how much data a company has about you).

- the right to be forgotten – the right to ask a brand to delete your personal data (e.g., when you don't want to receive any products or offers anymore).

- the right to object to direct marketing – the right to ask a brand to stop sending you promotional or marketing messages (e.g., when you receive emails about products and services you do not want).

- the right to opt out – the right to ask a brand to stop selling your personal data or using it for business benefit.

- right to rectification – the right to ask a brand to rectify personal information about you that is inaccurate or incomplete (e.g., they have your old address or there is a typo in your name).

These privacy laws (e.g., GDRP, CCPA; LGDP) include many obligations for brands in relation to data subject rights namely, a brand needs to - in a transparent way, and at no cost to the individual:

(i) inform consumers that these rights exist.
(ii) help consumers exercise these rights.
(iii) timely respond to a customer who exercises these rights, mostly within a period of 15 to 30 days.[15]

Both requirements as well as the rights ultimately aim to give individuals (you) more autonomy over their personal information and how it is used, in the hope to help restore consumers' trust in the digital economy.[16] However, even though these requirements and rights are put in place to empower people, people today are often not aware these rights exist. Even if they would, how do you exercise them? There is a clear lack of educational resources and necessary tools to effectively make use of these rights by people against the (mis)use of their personal data.

2.4 The end of cookies – post-cookie privacy preserving solutions

One of the most important proposals to combat the misuse of personal data in the AdTech industry is to eliminate third-party cookies, the most widespread technique to conduct – privacy threatening – tracking of people on the web.[19] TThere is a very intense and still open debate about what is referred to as the "post-cookies era" in the context of online advertising. Different alternatives are being proposed, some of which opt for creating respectful unique user IDs that respond to the requirements of new data protection legislation such as explicit user consent.

As a first, Google took a very important step towards the elimination of unique identifiers and proposed FLOC (Federated Learning of Cohorts)[20], a solution where people will be assigned to a cohort formed by N (N > 1000) users, and only the cohort ID of a user will be revealed to third parties. While Google announced the cessation of cookies in Chrome browser (responsible of roughly 2/3 of the browser marketplace in both mobile and fixed devices) by the beginning of 2022, they've recently delayed this event to 2023 and it is still uncertain what will be the outcome of this process and how the post-cookie era will look like.

A second group of solutions, generally known as PIM (Personal Identity Management) platforms offer what we refer to as consent-based advertising. In this case, the PIM handles people's data, typically offering you the option to control your data and with whom it can be shared. This allows people to participate in the online advertising scheme through a truly consent-based process.

A final group of solutions offer privacy-preserving advertising approaches that in spirit try to achieve what we refer to in this whitepaper as Zero Knowledge Advertising (or ZKA), namely an advertising ecosystem where no personal data from an internet user is leaked or shared with third parties (i.e., advertisers, publishers, demand-side platforms, supply-side platforms), and where the individual still receives relevant ads anonymously

2.5 Consumers want control, but lack the knowledge and tools

Today, you have no control over the use of your personal data. Most people (probably many like you reading this paper) demand more control and are willing to take action to take back ownership of their digital lives but are lacking the tools or know-how to make this happen.

A recent consumer privacy survey conducted by Cisco Systems[19] – interviewing 2,600 adult respondents in 12 of the world's largest economies (five in Europe, four in Asia Pacific, and three in the Americas) – shows that people increasingly care about their personal data and want to actively take action to protect it. As illustrated below, the study showed that people are looking to take action to protect their data; with 84% of people who "care"; 80% of people who are "willing to act", and 48% of people who have already "acted", for example by switching companies or providers based on their data policies or data sharing practices. The insights show that people care about their data, and even 91% of the "privacy actives" – namely the 32% of all respondents that indicated they care about data privacy, AND are willing to act, AND have already taken action to protect their privacy – won't buy a product or service anymore if they don't trust how their data is being used. Finally, the study also showed many people feel they are unable to protect their personal data, naming one of the biggest challenges; how to figure out what companies are doing with their personal data.

That is where Profila steps in, by providing people with the tools to control their data and their experiences with brands. As explained below under "Profila Solution Today", Profila teaches people about their privacy (rights), how to exercise their rights, control the use of their data by brands, get compensated for shared data, and take action if their data is (mis)used.
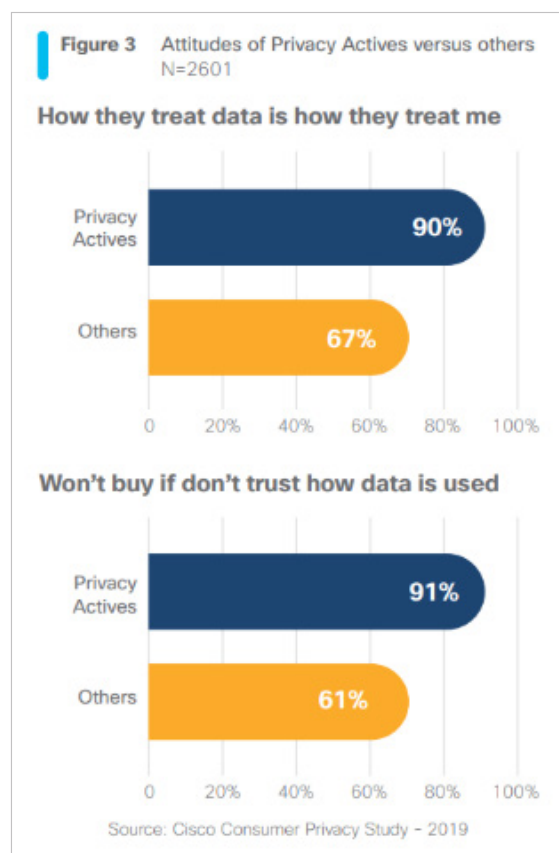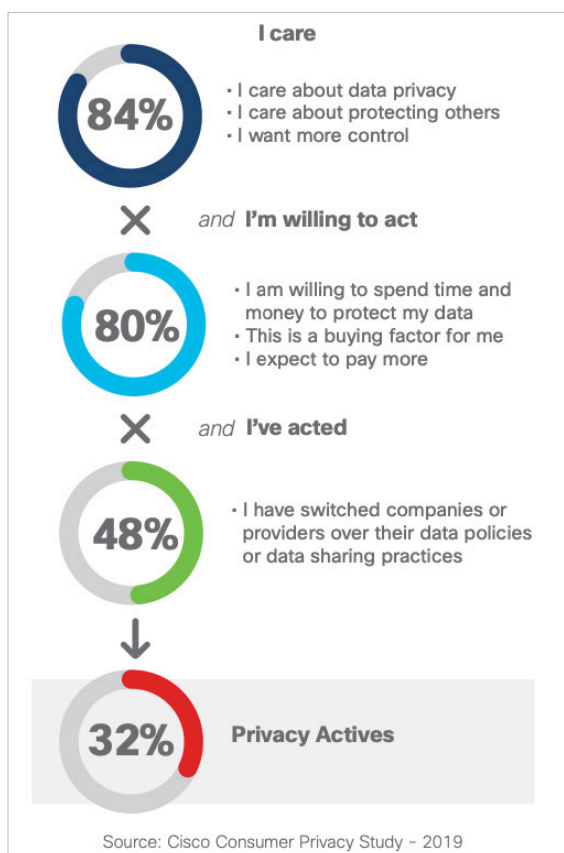
Illustration 2

across the internet (cross-site) and target advertising wherever that user goes", Death of Cookie Delayed Until 2023, Google Says [Next Steps for Advertisers], see https://tinuiti.com/blog/data-privacy/what-is-a-cookie-and-why-are-third-party-cookies-going-away/

[18] Recital 7 of the GDPR stresses the "the importance of creating the trust that will allow the digital economy to develop across the internal market".

[19] Cisco Survey, https://www.cisco.com/c/dam/global/en_uk/products/collateral/security/cybersecurity-series-2019-cps.pdf

Profila

03. PROFILA SOLUTION TODAY

*"We must work together with web companies to strike a balance that puts a fair level of **data control back in the hands of people**, including the development of new technology … and exploring **alternative revenue models like subscriptions and micropayments"***

(Tim Berners-Lee, developer of the worldwide web @ CERN[20]).

Profila's mobile application includes both features, namely (i) "data control" through privacy education & rights management tool [see screen 2]; and (ii) "subscriptions and micro-payments"; through our data subscriptions [see screen 1], in order to ultimately create a better environment for brands to listen to and delight their customers [see screen 3].
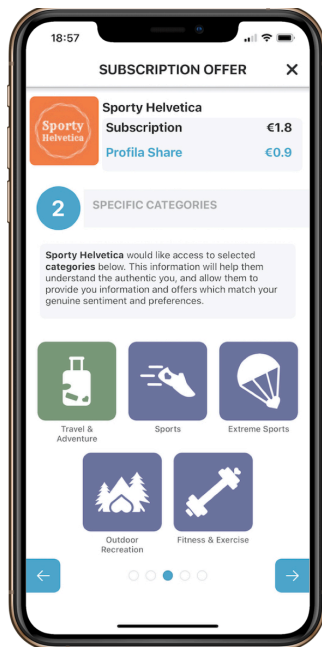
Subscription Offer to access
an individual's Profila based on
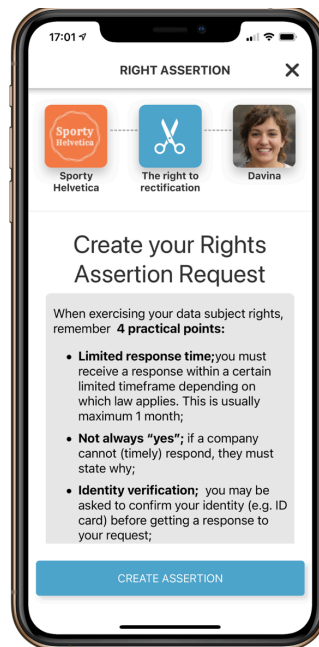
3-Step Process for
exercising privacy rights
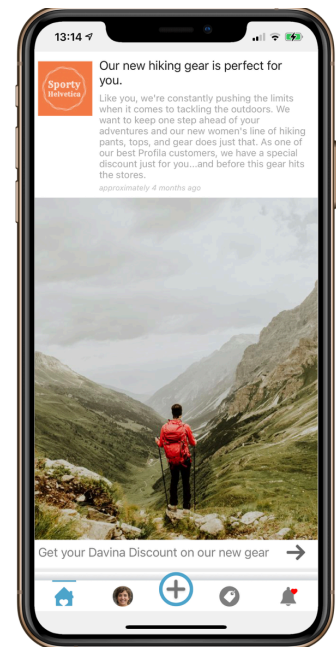
A private and personal
environment for brands to

Illustration 3

3.1 The Profila App - control your data …

(a) … through privacy education and rights management

A first step to effective data control is knowing your (data subject) rights[21] and acting against those who misuse your personal data. In order to use these data subject rights to your advantage, you need to (1) understand the scope of these data subject rights (step 1 "education"), and (2) understand how to manage or exercise these rights (step 2 "management").

Today, there is no tool that lets you learn about your rights and provides you with an easy way to exercise them. Some local websites of data protection authorities provide you with information and templates, but require you to download lengthy documents, fill out 10-15 elements in these documents, upload them, send them by email or post to the brand in question.[22] This process is only available for those people who actually know what a data protection authority is (=what?), and who are willing to spend some hours to get the template filled out and send (=where?).

That is where Profila comes in.

The Profila App has a privacy education and rights management function:

1) Education

"What is personal data? How long can a brand store personal data? Can a brand sell personal data of its consumers to third parties, who then send messages to those individuals? What can I do about it?"

The Profila App has 9 basic education or "awareness" modules about your privacy rights, explaining to you in understandable terms everything you need to know about privacy and your personal data in order to effectively control it.

Each privacy module tackles a different topic and explains in lay-man terms (although legally correct) and with examples "what is personal data", "what is

a controller/processor", "what are your data subject rights", e.g. "your right to be forgotten", "when can you exercise these rights", "why would you exercise these rights", "is a company obligated to respond", and many more.

2) Rights Management

"Dear Brand X, I liked your running shoes, but I do not appreciate the daily emails about other products. I therefore send you this "right to object to direct marketing" so I do not receive any more marketing emails."

The Profila App has a dashboard which allows you to manage or effectively exercise your rights, e.g., use your "right to object" to the Wholefoods to stop sending you daily emails, or use your "right to be forgotten" to ask Wholefoods to erase all your personal data (e.g., if you no longer want to be a customer).
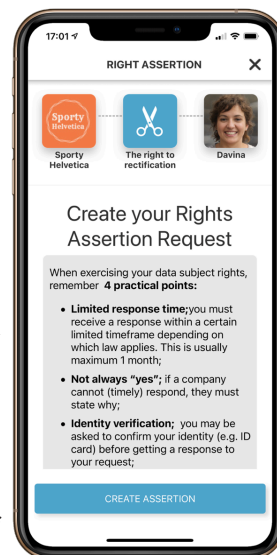
Profila reduced this difficult process to an easy 3-click step process, where you can (1) choose a company logo (recipient of the right request); (2) click on one of the 8 data rights[23], and (3) include an identifier (email; mobile number).

Profila forwards an email to the brand (with you in copy), which specifies in legal terms your request (so you don't have to)[24]. According to the law that applies to your relationship with this brand (which is determined based on your country of residence/nationality), the brand will be legally required to respond to you within 15-30 days.

Profila's rights management functionality is already implemented on the Cardano blockchain as part of the Catalyst[25] challenge (fund 5 "metadata"). Our funded project – called "control your data – privacy ledger" is committing (hashed) information from this transaction onto the Cardano blockchain, in order to provide rights requested proof for future reference. More details about the project proposal can be found via the URL[26], or in the roadmap description below (see section 4).

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[21]We discussed this concept of data subject rights earlier under section 2.3 Privacy laws around the world – a first step in the right direction.
[22]As an example, see the website of the Belgian data protection authority ("DPA")
, https://www.gegevensbeschermingsautoriteit.be/burger/privacy/wat-zijn-mijn-rechten
[23]For a more detailed description of the 8 data subject rights currently available in the Profila App's privacy right dashboard, please consult the information in Annex II to this Whitepaper, which also explains we will introduce country- and region specific rights and education modules.
[24]An example of such email is available in Annex III to this Whitepaper.
[25]Project Catalyst is an experiment in community innovation, providing a framework to turn ideas into impactful real-world projects. Catalyst is a community lead project, where the Cardano community votes on the projects submitted. Catalyst was brought to live by IOG (input output global)/IOHK (input output Hong Kong), https://iohk.io/
[26]https://cardano.ideascale.com/a/dtd/Control-your-data-%E2%80%93-privacy-ledger/350680-48088.

(b)   ... through data subscriptions

"Dear brand Y, I will grant you access to my email address and my clothing preferences, but only during the summer, because I only want to receive offers on surf and swimwear, and only contact me via WhatsApp and Profila, because I probably wouldn't read it if you send it via email"

A second step to get data control, is keeping track of your personal data. Where does your personal data reside and who has access to it? This is taken care of by Profila's functionality called "data subscriptions", which allows people to keep track of the data they shared with brands, including information about what kind of data, the purpose and duration, and ultimately receive a compensation from brands that subscribe to their data (personal data is never sold).

Via Profila's web-based Brand Dashboard, a brand can send a "subscription offer" to (existing or new) customers, in which the brand can detail which of your personal information in your Profila App (one source of truth with your contact details, communication, product preferences) they request access to, and in which they include some key contractual terms in relation to your interaction; i.e. (1) the specific data they require, (2) the duration you grant access; (3) the purpose for which the brand wants to use it; and (4) the compensation you receive in exchange.

Our process makes sure the brand explains the terms in understandable language, so the consumer knows what he/she agrees to. The Brand Dashboard therefore helps each brand comply with its information and transparency requirement (as explained earlier).
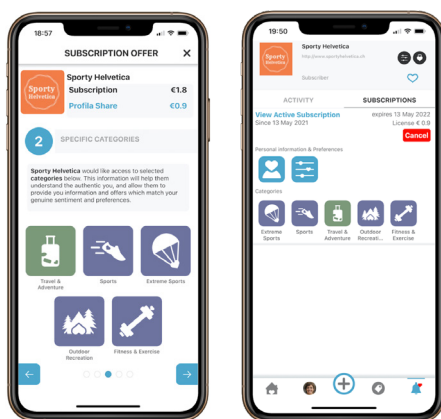
Our revenue model is 50/50, meaning that every USD that a brand pays for accessing your personal data (and showing you its products/services), we share 50/50 with consumers. People (you) are our partners, and your brands are our customers.

If you do not agree to these terms, you remain anonymous, and the brand will never see your personal data. You ultimately control whether data is shared, or not.

If you do agree to these terms, you click "accept" and both parties conclude a data subscription contract. Payment is made by the brand at intervals throughout the contract terms (usually monthly), on the conditions that the consumers' personal data is kept up to date, and the brand can also access additional data about the consumer's preferences for certain products and services relevant for the brand.

E.g., Wholefoods pays Alice 12 USD/year (1 USD each month) to access her (i) personal data (email, phone) (ii) preferences about food (vegetarian, bio-products, lactose intolerant) and (iii) communication preferences (Alice would like to receive discounts/product info via WhatsApp and Profila). This helps Wholefoods to serve Alice better. If Wholefoods listens to Alice, she will be a happy customer. Alice gets the products she likes and service she requested and receives a compensation for the use of her personal data by Wholefoods. For each advert she watches, Alice gets paid. If Alice wants to know in the future what she agreed to, she can easily verify the terms of her relationship with Wholefoods in her Profila App (under the Wholefoods data subscription). If Alice wants the relationship to stop, she can end the contract and exercise her "right to be forgotten", so that Wholefoods is legally required to delete her personal data.

Profila's data subscription functionality is already being implemented on the Cardano blockchain as part of the Catalyst[27] challenge (fund 6 "dapps and integrations"). Our funded project – called "dapp to control/monetize your data" is committing (hashed) information from each data subscription onto the Cardano blockchain, in order to provide rights requested proof for future reference of each piece of data that was shared with a specific company, including the terms under which this was shared. More details about the funded project can be found via the URL[28] , or in the roadmap description below (see section 4) or in our Medium article "Profila Receives Additional Funding From The Cardano Community", see here.

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[27]Project Catalyst is an experiment in community innovation, providing a framework to turn ideas into impactful real-world projects. Catalyst is a community lead project, where the Cardano community votes on the projects submitted. Catalyst was brought to live by IOG (input output global)/IOHK (input output Hong Kong), https://iohk.io/
[28]https://cardano.ideascale.com/a/dtd/Dapp-to-control-monetize-your-data/366908-48088.

3.2 The Profila Platform – ultimately, it's about improving relationships

Profila has designed and developed its platform to improve the consumer-to-brand relationship by empowering people to have better digital relationships with brands.

After you take "control" of your relationship with a brand, you can communicate with various organizations in your life, privately, 1-1, and without surveillance. You can tell brands how you want to be approached (or not), and what you like (or dislike) about their products, services, or even their communication with you.

You can manage your digital life in one location. You can sort all your personal information, brand, product, service preferences, and communication channels and communicate with brands you want to interact with in the same easy way (instead of using each individual brand's app/website).

A brand can learn to respect its customer's (your) privacy settings and communication choices, learn more about the customer's channel and product preferences, and provide each individual with a personalized experience, ultimately benefitting both you as a customer as well as the brand. Brands can use Profila as a new source of accurate and ethically sourced data, a private marketing platform & advertising channel that helps the brand provide a personalized experience based on the instructions of each individual and tuned to the digital pace of each individual.

Customer value

Customers earn cash and exclusive brand value for maintaining accurate & active profiles

01.
Customers create, maintain and selectively share their digital profile

03.
Customers are in control and choose when & where they want brand marketing & communication
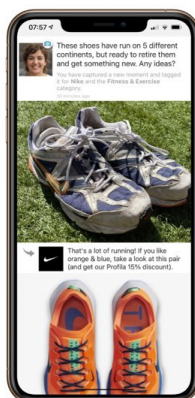
02.
Customers manage & assert their data privacy & rights

04.
Customers receive hyper-targeted personalized content & offers

Illustration 4.1

Brand value

Communicate with & market to your most valuable customers on a private, surveillance free platform

01.
Subscribe to evergreen & accurate zero-party data & insights

03.
Benefit from the ultimate customer managed preference centre (CPC)

02.
Support your customer data privacy management process

04.
Personalize your marketing based on the best preference data & insights

Illustration 4.2

Profila

(a) Feature highlight – consumer and brand "moments" to reinvent customer feedback loops

As part of our mission to improve private 1:1 communication between people and brands, Profila has a feature called "Consumer Moments" and "Brand Moments". Consumer Moments are a great way to capture your opinions or sentiments on any topic, and share content or feedback with a specific brand, in a private and personal manner. A Consumer Moment is a photo or video that you can create and share in Profila, to which you can attach a comment and/or an emoji to express your thoughts and sentiment.

Let's clarify this using an example of a good brand experience. You are and have always been a Nike fan. You had your favorite pair of Nike running shoes for many years and are now looking to replace them. This is a perfect moment to share this with Nike and you take one last picture of your Nike shoes, asking Nike for suggestions on a new pair (see screen 1 on illustration 4). Once you capture the Consumer Moment, you can take the following actions to add relevance to the picture or video:

- tag it to an industry "category" (e.g., tag the category "Adventure" or "sports" because it relates to shoes).
- tag a relevant brand (e.g., tag "Nike" if you want Profila to send the content to Nike).
- add sentiment to it (e.g., a smiley face emoticon or thumbs up).
- Once you are ready, you can send it directly to the Brand, who will be able to respond directly to your shared Consumer Moment with a Brand Moment (see screen 3 on illustration 4). Nike seems to appreciate your picture and responds with an exclusive offer for a new pair of Nike running shoes.

This scenario also works for a bad experience. If you bought your expensive Nike running shoes and they break on day 1; you can also take a picture or make a video, add a negative/unhappy emoticon, clarify you just bought them, and send it off to Nike for urgent feedback and resolution.

Profila's Consumer Moments functionality is already being implemented on the Cardano blockchain as part of the Catalyst[29] challenge (fund 6 "NFT business models"). Our funded project – called "NFT for customer feedback/content

NFT for customer feedback/content" relates to constructive customer feedback and creative customer content, shared by people with brands. Each time you use the Profila app to share with a specific brand of your choose your feedback or self-created content about their products or services (by sending in a picture, video or text via our existing "consumer moments" functionality), you can do so (1) privately for only the brand to see and respond to (option 1), or (2) you can choose to "create an NFT" representing your content, making it "tradeable" (option 2).

If you choose to create an NFT, it will be available to Brands for more elaborate use. By offering your content as an NFT, you invite a brand to use your consumer-created content in their commercial business (e.g., to publish on their website as example to other customer, or to integrate it into their marketing content). If the brand values your customer feedback (either for internal use or for public commercial use), they can compensate you for it by acquiring the NFT.

More details about the funded project can be found via the URL[30] , or in the roadmap description below (see section 4) or in our Medium article "Profila Receives Additional Funding From The Cardano Community", see here.

Capture a Moment and share with a tagged brand in a private environment

You can make a Moment tradeable by a brand for their promotional efforts

A brand can respond to your private moment with a personalized offer
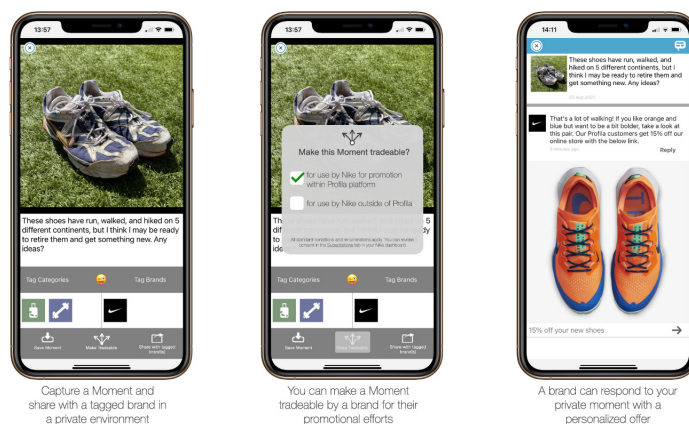
Illustration 5

(b) Upcoming feature highlight – "metronome" as the toolbox to tell brands how best to contact you

Another feature we are developing to improve people's relationship with brands is called "Metronome".

Named after the music accessory that helps you keep the right cadence while playing an instrument, metronome will give you the ability to control the channel preference, cadence, and type of communication that a brand can send you. In short, it enables individuals to have full control over the flow through the "pipes".

- *Channel* - what channel do you want a brand to use to send you content? Choose if this should be "Profila", or a specific email, WhatsApp, paper mail, telephone, or anything else you prefer for a specific relationship. Don't just let them decide.

- *Cadence* - How many offers/ads do you wish to receive per brand relationship within a defined period (per week, per month). You can even put the slider on "0" when you are on vacation so you can let an organization know you do not want to receive any messages at all!

- *Type of communication* - What kinds of content do you wish to receive? Maybe you like specific info about new products, but you do not want all these weekly company updates. Choose what gets into your mailbox (or other preferred channel like Profila) and stop the clutter.

People's use of metronome will result in brands sending you less content (e.g., emails) but when they do, it will be more relevant and via the channel of your choice, all leading to a better relationship and more effective marketing spend by brands. Because let's face it, nobody wants meaningless and untimely messages from the brands we have relationships with.
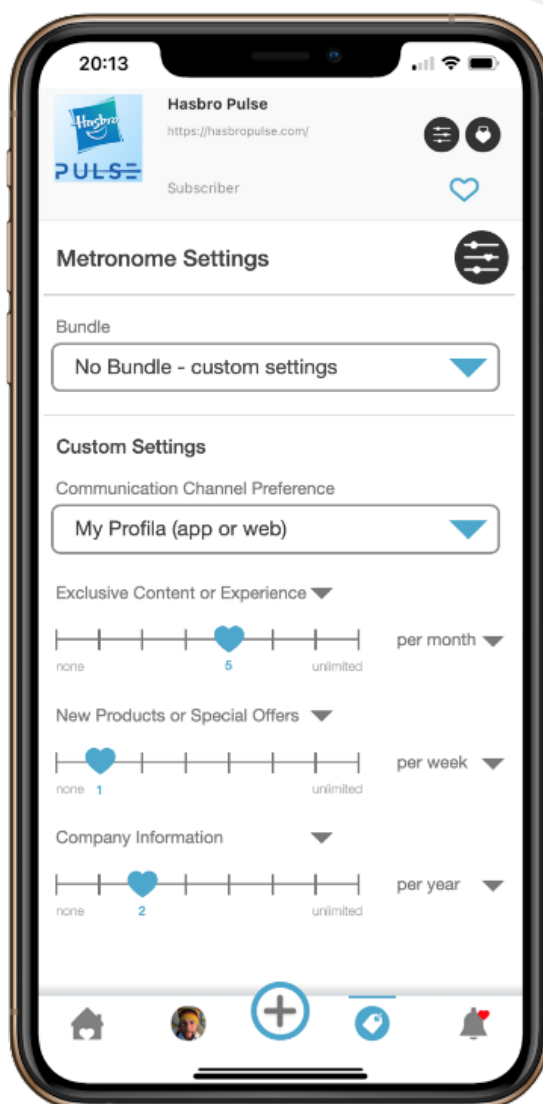
Profila

04. PRIVACY AND ADTECH RESEARCH

In order to further enhance the tools available for people to control their data and relationships with brands and protect their identity while making use of the internet, Profila has concluded long term research partnerships with prominent universities in Europe. We are actively working together with several important researchers who are experts in this space.

This section includes more information about Profila's important research activities into privacy-preserving technologies, more specifically our research partnerships with (i) the University of Madrid III, Big Data Science Institute – Santander on privacy preserving AdTech solutions to replace third party cookies ("Project Madrid"), and (ii) with the University of Luzern on our smart privacy knowledge base and AI lawyer ("Project Innosuisse").

4.1 Project Madrid and the road to Zero Knowledge and Decentralized Marketing (DeMar)

(a) Zero Knowledge Proofs (ZKP)

The name "Zero Knowledge" is commonly used in reference to zero-knowledge proofs (referred to as ZKP), a digital protocol that allows data to be shared between two parties without the use of a password or without sharing any other information associated with the transaction. ZKP is a protocol through which a digital authentication process can be facilitated without the use of any passwords or other sensitive data. As a result of this, no information, either from the sender's or receiver's end, can be compromised in any way . ZKP (when available on leading blockchain platforms) allows people to communicate with one another without having to reveal the content of their interactions with any third party.

Profila is analyzing whether this technology can be used as part of our privacy-preserving stack of technologies, ultimately giving consumers more control over who has access to their data. Profila has been researching how to potentially implement zero-knowledge proofs into a consumer and brand relationship, as part of its new privacy-preserving advertising solution concept we call "Zero Knowledge Advertising" (ZKA in short), built to replace third party cookies, and protect people's identity and personal data online.

(b) Zero Knowledge Advertising (ZKA)

Zero Knowledge Advertising or ZKA allows people to remain anonymous on the internet while still viewing personalized content from brands. Personalized ads are delivered to users without sharing any users' data with third parties. This new solution is explained in detail in our research paper (technical whitepaper) named "Zero Knowledge Advertising: a new era of

privacy-preserving AdTech solutions" that Profila co-authored with the University of Madrid III, Big Data Science Institute – Santander (hereinafter the "ZKA Research Paper", read the full version on our website here),

With ZKA, Profila is proposing a novel privacy-preserving alternative to third party cookies, in an attempt to solve privacy issues in the AdTech industry. On the one hand, ZKA will provide the AdTech ecosystem with a smarter, more efficient, and safe advertising and marketing alternative to cookies and Google FLOC, or other projects like Brave. On the other hand, ZKA will provide people with full control whether their browse the internet anonymous, or whether they reveal (parts of) their identity to advertisers.

The main functionalities of our solution are: 1) It is actionable in different venues (e.g., mobile apps, web browsers, video platforms) contrary to walled garden approaches (such as Brave); and 2) It offers two operation modes:

(i) *the default mode is zero knowledge advertising, where personalized ads are delivered to users without sharing any users' data with third parties.*

An individual (Profila user) who chooses to activate Zero Knowledge Advertising in the Profila App, can choose to browse the internet anonymously (on each browser with a Profila plugin and each mobile app which installed a Profila SDK) – while still watching relevant content as defined by him/her via Profila – by making use of a peer-to-peer network of other Profila users that (help) hide his/her identity towards advertisers and publishers. The latter still have a guarantee that their content is viewed by relevant people, but do not (need to) know the personal information about the viewer. Each Profila user or "peer" in the network who participates to keep the anonymity of another user will receive a small incentive in ZKT deducted from the advertisement income you (50%) and Profila (50%) receive. Only if you hold ZKT can you access this anonymity functionality.

(ii) *The second mode is referred to as consent-based advertising, and it requires the proactive action of the user to activate it.*

In this mode, the user explicitly selects what personal data items (if any) they are willing to share with each advertiser. To illustrate this mode, let us think of a scenario where a user is willing to share: her height and weight with an advertiser A that sells clothes, her location with an advertiser B that sends last-minute restaurant discounts, and her interest on rock music with an advertiser C that promotes rock

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[31] S. Jagati, "Zero Knowledge Proofs, Explained", see https://cointelegraph.com/explained/zero-knowledge-proofs-explained.

music concerts. Under this mode an advertiser with the user's consent can keep trace of the specific interactions of the user with its ads.

In our solution, users are rewarded for both their interaction (e.g., watching or clicking) with ads as well as for the data they voluntarily decide to share with advertisers.

(c) Decentralized Marketing (DeMar)

The ZKA solution as well as the consent-based advertising model by Profila together create a consumer-controlled marketing experience, where data is shared and ads are delivered in a decentralized way. Profila is therefore creating the term "decentralized marketing" or short "DeMar" to introduce this new model where consumers will have a greater control over their data and the ads they see, and most importantly, they will be able to directly connect with brands that matter to them, without passing by the numerous intermediaries in today's advertising ecosystem. Brands will have a clearer view on who sees their content.

With DeMar, Profila will unlock the real value of personal data whilst capturing increasing percentages of global data and advertising revenues

(expected to reach USD 982.82 billion by 2025) as brands seek alternatives to tracking centric platforms (Facebook & Google).

4.2 Project Innosuisse and your own AI lawyer

Profila and the Information Systems Research Lab of the University of Lucerne of Applied Sciences (Hochschule Luzern, HSLU) have partnered to tackle an ambitious privacy research project. On the 21th of April 2021, Innosuisse approved to fund the Profila and HSLU research collaboration project 50446.1 IP-ICT with the title "P2Sr Profila Privacy Simplified reloaded: Open-smart knowledge base on Swiss privacy policies and Swiss privacy legislation, simplifying consumers' access to legal knowledge and expertise" (See HSLU and Aramis, Swiss government).

The main goal of this 24-month project is helping consumers to understand which data usage agreements they agreed upon and how accordingly their data can being used online. Profila and HSLU are developing a "smart knowledge base" (KB) composed of questions and answers (Q&A) that can be matched with the specific doubt or question a user has. This will work as the intelligence behind a conversational agent (or our "AI lawyer"), proposed as a self-help tool.

This should be able to solve the most common and standard aspects but will fail for more specific needs. In order to provide an advanced service, a match between the specific request and experts will be provided, in order to give a rapid and low-cost option to clarify the subject with a legal expert.

Additionally, by collecting user feedback about the perceived quality of the information and the experts suggested, the system will improve its own performance, taking into account these metrics.

The vision is to provide a one-stop-solution for every user privacy-oriented question of online services. The creation of the KB (on the top left in the illustration) and the matching algorithm will be based on Natural Language Processing (NLP), in order to support the adoption of natural language in the interaction with the user, thus reducing the entry barrier for customers.

Profila

05. ZKT TOKENOMICS – UTILITY

Profila's Cardano-native token "Zero Knowlegde Token" has several functionalities (reward allocation, governance, gamified utility and payments).

In this section, we highlight the utility linked to our project catalyst funded project "Anonymity and Data Control with ZKT' (see here), which discussed in more detail the gamified tokenization of the ZKT (or §ZEKE).

5.1 Profila app ... all about improving relationships with brands

The Profila platform is designed to empowering people to have better digital relationships with brands, by giving them the tools to control how brands can communicate to them (in terms of channel, frequency, and content). Because a brand has direct access to this data shared by each individual, a brand can learn more about its customers; respect their (your) privacy settings and communication choices, learn more about the customer's channel and product preferences.

This data then helps the brand to provide each individual with a personalized experience, ultimately benefitting both you as a customer as well as the brand. Brands can use Profila as a new source of accurate and ethically sourced data, as well as a customer engagement and marketing platform channel that helps the brand provide a personalized experience based on the instructions of each individual and tuned to the digital pace of each individual.

5.2 Profila agents ... consumers, brands, and Profila

a) Consumers

Consumers exist on a spectrum, from one-time purchasers to regular customers, brand loyalists, content creators, superfans, or even brand ambassadors. Some are devout followers of certain brands and want to get closer to them, others only want to receive content from a brand (only) when they require a product or service.
At the same time, regardless of their desired level of engagement, they are all inundated by ads at every single second of the day, walking around town, on Youtube, Instagram, when speaking with other people. Every moment of someone's life has become adspace and as such we must offer something truly unique for people that are willing to offer us their valuable time.
Via the Profila app's self-discovery journey, each consumer will be able to choose what Categories they fill in and to what level they go. Based on your engagement with a specific niche (e.g., eco-friendly traveler level 5 + vegan level 3), you can define in detail what kind of consumer you are.

b) Brands

Brands want a stable and consistent revenue source at the end of the day. They want to expose themselves to consumers who are actively searching for them (or their products and services) and then hope to convert said consumers into purchasers of the brands.

As was said above, ads are everywhere and Brands have to find venues where they are able to get their ads in front of consumers who are already suggestive to watching and consuming ads and or wish to become closer to their favourite brands. They have many places to advertise and have to choose specifically where and how based on retention and conversion.

Today if a brand wants to have an online presence, there is no other alternative than using the advertising services that Facebook, Instagram and Google provide, even though your brand is then participating to and even financing this large-scale personal data abuse and is not listening to what people want. Also, online advertising stakeholders still largely fail to show people ads of real interest. The result is that many people consider online ads to be annoying and useless.

Profila provides this new private channel where brands can advertise at the space set by their consumer. In addition, the Categories within Profila will create outputs for brands that will allow them to personalize offers, create micro-segments, and provide them actionable insights to delight customers

c) Profila

Profila has the mission of aligning Consumers, Brands, and Itself via the application. A proper synergy between the three should look like consumers getting access to deals, specials and unique information from their favourite niches and brands, for brands they must have access to high-quality potential consumers that are willing to convert and ideally become long-term consumers at that. Profila must constantly expand its userbase to become attractive for as many brands as possible and build out its own internal application in order to have users view, create and share content (consuming ad content).
But how do you teach people to build that highly accurate set of data, privacy settings, communication preferences, and how do brands use all of this data

Profila

to personalize their content and provide customers (people) with that personal experience? That is where we created our own token, called Zero Knowlegde Token", ZEKE (in short) or ZKT, with the ultimate goal to improve relationships and trust between people and brands. ZKT will help us achieve this goal, incentivize good behavior, help avoid any abuse of the platform and tools we make available and will compensate people and brands for taking part in this new engagement and experience model.

5.3 ZEKE … all about improving experiences and interactions with brands

"ZEKE functions as a marker of progress in the app. It indicates the progress of a person's self-discovery while he or she builds up the most accurate and authentical set of data about him or herself. It also measures your experience in relation to a specific brand or market. The higher you "level up" in your self-discovery process in the app, the more you will have access to exclusive brand content and experiences. ZKT will be crucial in this customer-to-brand relationship process, as it empowers, rewards and protects people and incentivizes both people and businesses to share better data, act more ethically when using data, and ultimately create a better customer relationship". - the Profila Team

(a) ZKT as Experience and Marker of Progress

ZKT measures an individual user's progress and "experience" within Profila.

Experience or "XP" (read: $ZEKE) in this form will unlock various features within Profila that further enhance and reveal deeper means of interaction and engagement with brands, but also the user's own data. This is achieved through a "levelling" based system (within individual Categories and at a profile level), but also through "badges" that are awarded for specific category achievements, as well as the ability to stake XP (explained below). This functionality encapsulates both data management features as well as self-discovery and profile development features.

(i) Self-discovery and Quizzes

The main XP that people can develop is linked to self-discovery via our Category Quizzes. Categories is a new concept from Profila that will empower individuals to create the most authentic, accurate, and valuable asset available anywhere. These interactive quizzes are designed for people to build up an accurate digital profile of themselves.

Personal Data and Psychographic Insights

This digital profile is created as you fill out the personal data section (your email, date of birth, name, picture, languages you speak etc.) as well as complete quizzes within specific categories (such as Food & Drink, Fashion, Travel). These quizzes are an enjoyable and interactive way for you to capture your preferences and thoughts via text or picture-based questionnaires. As you complete more quizzes, you earn XP and level up not only your profile, but the respective categories in which you have completed quizzes.

For example: If you are a big fan of "Outdoor Sports" and the subcategory "Running", you might be willing to participate in various forms of advertising within the Outdoor Sports category and the sub-niches of "Trial Running", "City Running" or even "Triathlon". By participating in advertising items that are in the general category you gain "experience points" (read: $ZEKE) and more experience points increase your level for a specific category and niche.

Category Quizzes and Insights
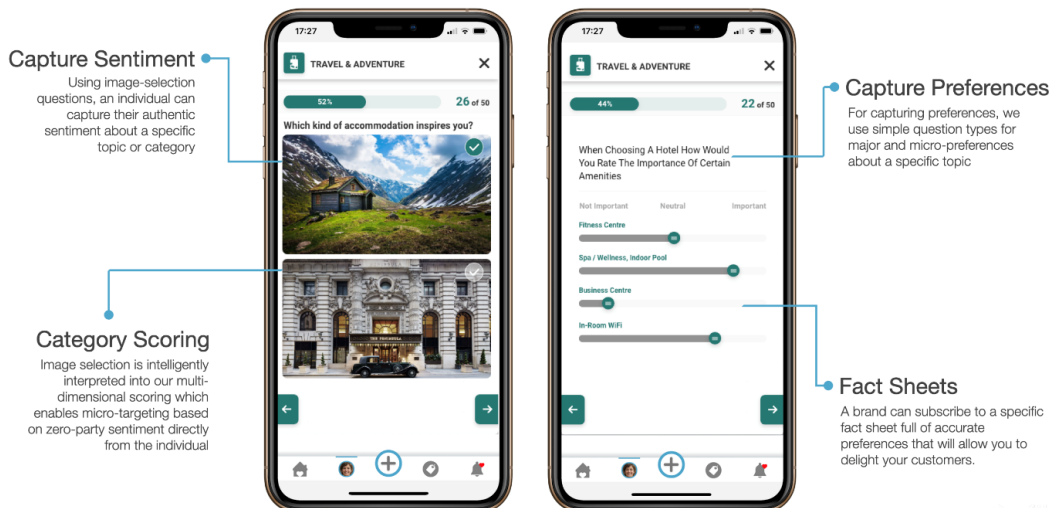
Profila

(ii) Staking to unlock new Quizzes

ZKT earned and accumulated (XP) can be used to specifically progress and enhance interactions within specific categories that you are interested in. This will be achieved by initially offering a select curation of categories to the user to delve into, whilst others remain locked until a certain amount of XP (i.e., ZKT) has been acquired. The acquired ZKT needs to be 'staked' within the app to unlock these new categories, as well as further levels within individual categories of particular interest and other benefits.

After earning XP in a specific subcategory of "Running" as part of the category like "Outdoor Sports", a user can go to the next level and stake the earned ZKT to unlock access to different subniches like "Running clothes" or "Triathlon nutrition" or "Running accessories". Or you might be interested in men's fashion. Eventually you complete all unlocked quizzes within Men's Fashion, and so to unlock the next level of depth (more specific questions, niche preferences) you will have to stake your ZKT tokens to this category to unlock the further benefits.

When a person fills out a Quiz, the data selected gets added to their Profila and increases the value of the digital profile. This profile can then be shared – by the individual alone – in exchange for a fee from brands they like, and ultimately for more personalized products and services from such brands. The higher a user rises in levels, and the more categories a user gains XP in, the more valuable a user becomes for a brand. This is because brands will use the levels to figure out what content to share with their customer base. Unless you decide to share personal data and category-data with a brand of your choice, your data stays safe inside Profila and is not shared with any brands.

(iii) Achievements & Badges

Additionally, users are rewarded with badges for reaching certain levels within categories, or for taking certain actions in the app, in order to provide a sense of achievement alongside encouraging further self-discovery. Badges are part of the gamification of Profila by providing fun and insights for individuals.

E.g., when you have filled out all levels of the "Running" category, you receive the "Ironman" badge. When you shared customer-created content with at least 10 brands, you earn the "Loyal Customer" badge, or when you exercise a privacy right (e.g., you ask brand to modify your privacy settings and change your email), you get the "privacy wizard" badge".

These badges, in combination with the levelling score for Categories and XP in ZKT, all serve to create the most accurate representation of yourself that will help brands understand who you are, so they know how to engage with you in a private and personalized manner.

(b) ZKT to improve interactions ... and create superfans (or not)

ZKT can also measure an individual user's "interactions" with a Brand within Profila. The XP that people can gain from interactions is linked to (i) brand content and advertising, and (ii) consumer content and feedback.

(i) Brand content and advertising

People can use the app to view content from Brands (personalized advertising on products and services) and interact with such content by opening the add, clicking through, or adding a (positive or negative) sentiment to the add you like or dislike.

People can earn additional brand-specific XP or content. The more you interact, the more your XP increases and the more ZEKE you collect. As you progress in levels you get more unique ads and personalized content, more unique opportunities, and rewards, you could potentially become a brand ambassador. At this point the interaction is very personal and unique.

This then acts as an amazing selling point towards brands as they can witness how their existing consumers are so involved in specific niches and really build out their own nodes to reward the consumers who are working hard farming and levelling their brand's node. For smaller brands, this opportunity is truly unique because you gain access to a consumer base that is highly active and marketable to and have the potential to cultivate super fans of your products by really building out nodes that compete with larger brands because you can focus on rewarding people who are really interacting with your ads on the platform.
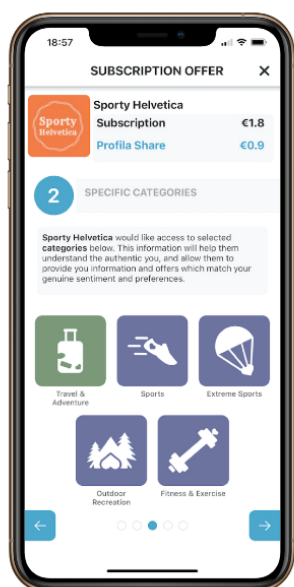
Subscription Offer to access an individual's Profila based on transparency and consent
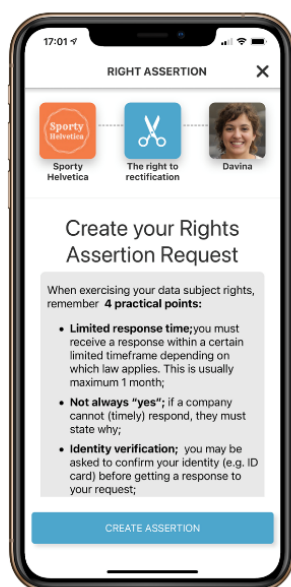
3-Step Process for exercising privacy rights
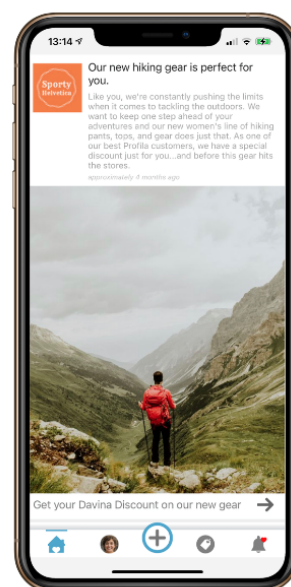
A private and personal environment for brands to delight their best customers

(ii) Consumer content and feedback

Another form of brand interaction where XP can be earned is through Moments, consumer created content that is directly shared with a brand. If a brand wants to commercially use your content, they can buy it in the form of an NFT. To know more about this, checkout our proposal funded under Project Catalyst fund 6, here.
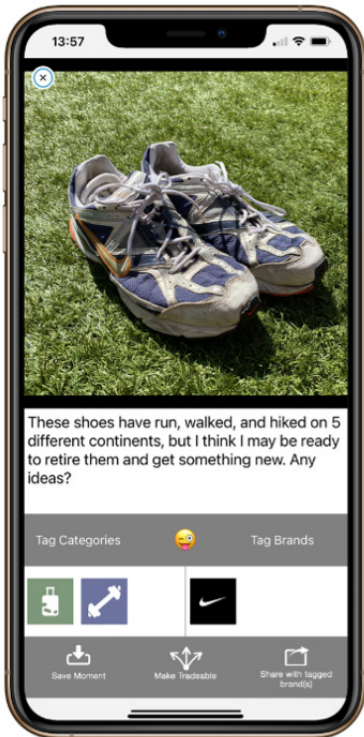
Capture a Moment and share with a tagged brand in a private environment
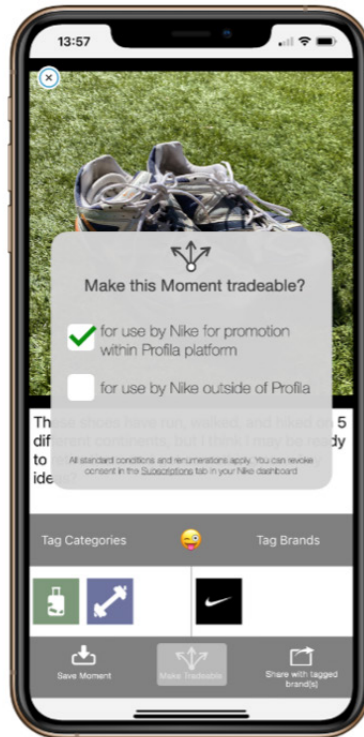
You can make a Moment tradeable by a brand for their promotional efforts
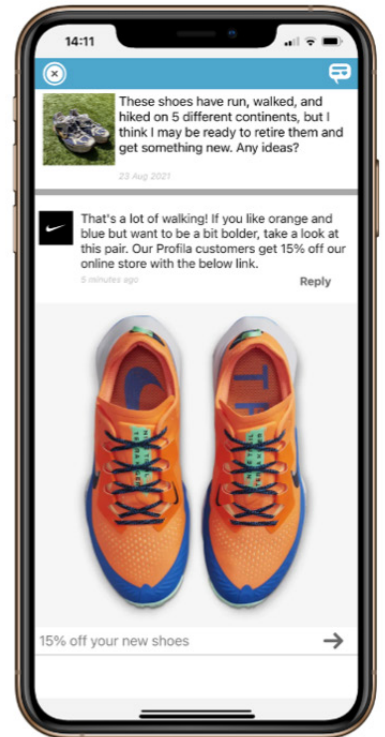
A brand can respond to your private moment with a personalized offer

5.4 Type of crypto asset

(a) Native token on Cardano

ZKT is a Cardano native token. Cardano is a proof-of-stake blockchain platform founded on peer-reviewed research and developed through evidence-based methods. Cardano's approach to building custom tokens differs from a non-native implementation of custom tokens, such as ERC-20, where custom tokens are implemented using smart contract functionality to simulate transfer of custom assets (i.e., a ledger accounting system).[32]

More info on Cardano and its technology can be found in section 9 "Cardano Technology and Wallets".

(b) ZKT's role and purpose

Depending on the specific functionality, ZKT's main role is a "function" to enrich the user experience, given in return for certain usage of the app features. In can also be used as a "toll" for people to participate in the usage fees of certain smart contracts that run on the platform, or "currency" for creating frictionless transactions between brands and people sharing data or payouts to people for watching brand content. ZKT holders will also be able to be the governance body of this new decentralized marketing platform (DeMar) on Cardano.

5.5 Reasons for offering a crypto asset to the public

First, we want to stimulate the consenting exchange of personal data and ultimately improve the relationships between people and brands.

A proper synergy between people and brands means that consumers get access to deals, specials and unique information from their favourite niches and brands at the right time and the right pace (controlled by the individual), and that brands get access to high-quality potential consumers that are willing to convert and ideally become long-term consumers at that. ZKT in the form of XP will help us achieve this goal, will incentivize people's engagement through self-discovery and brand interactions, and compensate people and brands for taking part in this new engagement and experience model.

Second, our token will help to provide "certainty" that (inter)actions took place.

Many (trans)actions that happen in the Profila App have (legal) consequences. Therefore, we need certainty that they happened between the 2 parties. Certain important interactions or transactions will be linked to ZKT and a smart contract so you will be able to prove a certain (trans)action happened (e.g., you exercised a right, you shared data for a specific purpose and duration). ZKT is crucial to offset all blockchain entry fees that will happen when this data is logged on the Cardano blockchain.

Third, our token will be used to govern the decentralized marketing (DeMar) platform of the future ("governance") as the platform is build for people, to be governed by people, and reward ZKT holders for their governance efforts based on the number of ZKT. In many ways, this is how Project Catalyst functions and Cardano's native token functionalities allow for these governance and reward features by default.

Fourth, ZKT reduces the cost of transactions for data sharing (banking / payment service provider intermediaries) and improves the speed of transactions and can be used to offset blockchain entry fees.

Because most of the transactions in Profila are small value, high volume payments between companies and individuals worldwide, transferring small amounts (e.g., 0,5 EUR for a data license) from a Japanese company to a Swiss individual will be less costly if it happens in tokens. In addition, the transaction speed will be higher, as we do not need to rely on intermediaries to transfer funds. In this setup, the ZKT token's role is merely a "currency" for distributing benefits (profit sharing).

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[32]For more information about the difference between Cardano native tokens and ERC-20 tokens, see "What is a native token and how does it compare to ADA and ERC20?", available via https://cardano-ledger.readthedocs.io/en/latest/explanations/features.html or "Native Tokens on Cardano", available via https://iohk.io/en/blog/posts/2020/12/08/native-tokens-on-cardano/.

Profila

06. ROADMAP
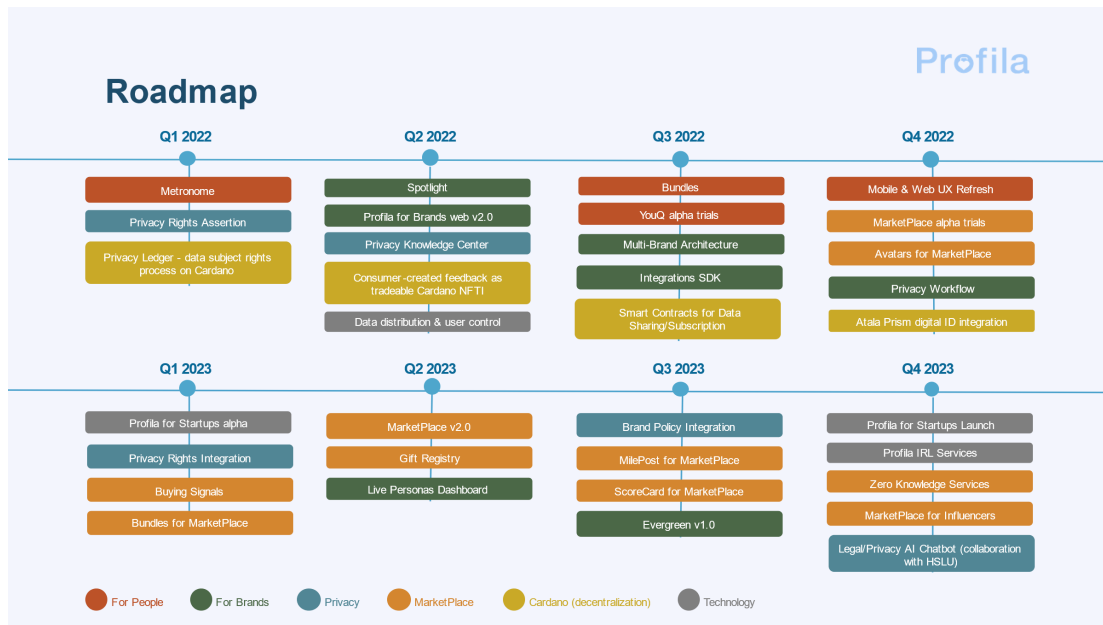
This section provides more detail about (i) the key features of the products or services developed or to be developed and (ii) the project organisation, including the description of the past and future milestones of the project and, where applicable, resources already allocated to the project; (iii) the planned use of funds collected via the offer to the public of the ZKT token.

Profila Product Development – the Profila App, Brand Dashboard, Chatbot, and Marketplace (together referred to as the "Platform") are being developed in different stages, with what we define as "Platform v.1" below already finalized before the start of the :

6.1 Profila Platform

(a) Mobile application and brand dashboard ("Platform V1")

Profila already developed and deployed the Profila mobile application for individuals (iOS and Android) (or "Profila App") and web-platform for brands https://brands.profila.com/ ("Brand Dashboard").

The Profila App contains a.o. the following features:

o   a personal "Profila" in which each user can create and manage its own personal information, including needs, desires and preferences.

o   a gamified education section with different modules that teach users about (privacy) rights.

o   a rights management tool that allows an individual to exercise his/her data privacy rights.

o   a "moments" function (Consumer Moment) that allows each individual to capture their sentiments, desires, or preferences about a brand or product, with each "moment" becoming a part of the individual's Profila, along with the option of sharing this "moment" directly with the relevant brand.

o   a "self-discovery quiz" section (Category Quiz) that allows each individual to create the most accurate, authentic, and valuable Zero Party Data[35] about themselves about a range of topics and categories. The data points and insights created are unique in the current market because it is both created and managed by the individual as well being available to brands only based on a consensual subscription to that individual 's Profila. The more quizzes completed, the more valuable an individual 's Profila becomes, especially compared to existing methods of surveillance or observed behaviour online. There are currently 50 main categories ranging from travel, to fashion, to home improvement, with many more in planning.

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[35] Zero Party Data is data that a customer intentionally and proactively shares with a company.

o a "data subscription" process (Data Subscription) that allows for individuals to enter into a contract with an unlimited number of brands which governs the brand's access to an individual's "Profila" of personal data under the terms set out in that contract (data license with a specific duration, a purpose for the use of such data, and a compensation for the individual).

The Brand Dashboard contains a.o. the following features:

o a brand portal in which the brand can manage all its company information, contact details, information about how it processes personal data;

o a functionality to send Brand Moments; which is similar to a social media post, consisting of a picture, text message, video, audio, article or any other form of (marketing) content, (promotional) offers or information about a Brand, its products or services or other (profit or non-profit) activities, that a Brand can share with those individuals in the brand's subscription base (individuals who have consented to share their Profila). These Brand Moments can be actively managed to be sent via the Profila app to targeted segments of a brand's subscription base;

o a dashboard in which the brand can have an overview of each individual consumer that accepted to share data; including the relationship with this consumer (=how many interactions, what data was shared, etc) as well as analytics and insights about different target segments based on demographics, psychographics, and/or engagement metrics;

o The ZKT Use cases no. 1 – 4 are part of the Platform V.1.

The development of the Profila App and Brand Dashboard started in late 2019 and the first version thereof was finalized in Q2 of 2021. The first users are onboarded in Q3 of 2021.

(b) Profila Platform Expansion (for both individuals and brands) ("Platform V2.0")

The Profila App and Brand Dashboard will be further enhanced with additional functionalities and features (the "Platform V2"). Different features of Platform V1 will be further enhanced, and additional features will be included, e.g.:

o The Mobile App's will be enhanced with additional Category Quizzes; third party data storage options (e.g., Solid pods); the "metronome" function (see 3.2.b)), overall improved UX and UI; explainer video's; additional privacy content for multiple jurisdictions; additional gamification; translation of the App in Spanish, French, and other languages based on our user expansion;

o The Brand Dashboard's will be enhanced with features in relation to privacy (data subject rights management, breach management); data insights (psychographics and customer intent dashboards) and AdTech/communication features (ad activation platform) as set out in the illustration below.

o On the infrastructure side, Profila will work on (i) data protection features (data flow management, personal database decentralization, privacy contract blockchain, digital ID); (ii) platform features such as business intelligence (BI) & analytics (Power BI; custom psychographic CMS; AI & Video analytics), as well as the development of a Microsoft Dynamics environment for Brands' CRM data management, and (iii) DevOps system hardening with certain security improvements.

o As set out in the Catalyst proposal under fund 6 "Control your data (vault) via PRISM", Profila will integrate ATALA Prism https://www.atalaprism.io/ (as digital ID and identity management solution in the Profila App. If you want to control your data online and receive (financial) compensation for your data, it is important you can provide proof of your identity. ATALA PRISM is the perfect solution. By integrating PRISM, we can better guarantee that the correct person is sharing information and is receiving payments.

OSS/BSS & Infrastructure

o Data Protection
   ◇ Data flow consent management, middleware, GDPR, HIPPA compliance
o BI & Analytics
   ◇ AI video & image analytics
   ◇ Custom psychographic CMS
   ◇ Power BI Cognitive Analytics

Profila

(c) Consumer Experience

o The consumer experience for version 2 of the Profila Platform will build on the foundation already completed in the mobile app. Moving forward, the consumer experience will not be limited to mobile devices but will be increasingly device/screen agnostic; encompassing a browser version with the increased real-estate of a web platform enabling new features difficult to manage on a mobile device, as well as targeted uses of wearables for specific Profila features. Additionally, specific initiatives on a variety of workstreams are in planning.

(i) Metronome

While ZKS concerns itself with what information is shared and in what situations, Metronome is all about the individual being able to manage the pace and flow of the communication from brands; whether those that subscribe to the individual's Profila or responding to a MarketPlace need or want.

We are developing an umbrella concept with the code name Metronome which is based on the idea of empowering individuals with granular control within different data scenarios and relationship archetypes. These features will involve providing clear consent about the channel preference, cadence, and type of communication allowed between organizations (whether being brands, companies, or other kinds of organizations), In short, it enables individuals to have full control over the flow through the "pipes". These explicit preferences will be controlled by individuals across all of their scenarios and relationships or more granular per brand or industry. These preferences will be captured by utilizing translation metadata to ensure that the scope and details of these preferences are captured and enforced.

(ii) Sidekick

The Profila vision is ambitious and expansive. We are reordering the balance of power between individuals and organizations that desire to provide them content, products, and services. Profila includes a number of revolutionary concepts (such as a Brand subscribing to your data) that there will be challenges in raising the knowledge of individuals about this new way of thinking about the value of their Profila and how to best manage their Profila with minimal time investment. That's where Sidekick comes in.

Sidekick will be an AI-powered personal assistant that helps you set up and monitor all of the core Profila features and will do so with a clear eye toward ethical nudging. Sidekick is built to serve you and make you feel comfortable with how Profila is working for you. For instance, Sidekick will help you create your first anonymous Avatar for our Marketplace (perhaps your travel persona) and ensure the right settings so that you remain anonymous until you decide to engage with a brand, that you aren't overwhelmed with offers and communication, and that you limit yourself to reputable brands who use Profila ethically. Another example would be to help you create Bundles, groups of brands that have the same subscription and metronome settings. Bundles will make it easier to attach all the necessary protections to new subscriptions or connections without a lot of effort. If an individual has, for instance, a fashion Bundle, and a new brand subscribes to their Profila, the individual can assign that brand to that fashion Bundle; assigning all of their restrictions and preferences for what data to share, how often they'll accept offers and exclusive content, and what should happen if a subscription lapses (for instance, trigger a Right to be Forgotten request).

(iii) Bundles

As described above, Bundles will make it easier to manage your Profila by providing the opportunity to bundle brands and organizations together in the ways that are right for you. These Bundles can be created and managed manually by each individual or be automated based on assigned criteria. For example, an individual can request that all travel companies that do not subscribe to them be put in a Bundle that provides zero-knowledge protection and limits the amount of communication and/or determines who can make offers based on an individual's travel buying signal. And Sidekick can also suggest new Bundles based on an individual's use of Profila.

Additional improvements to the platform consist of the following headlines:

o Privacy
  ◊ Expanded privacy consent management
  ◊ Privacy chatbot (research & development)
  ◊ DPA complaint management
o Data & Insights
  ◊ Self-discovery quiz expansion to include personas, achievement badges, and just-in-time sentiment capture
  ◊ Expanded preference management
  ◊ Child & pet Profila management
o Advertising & Communication
  ◊ Enhanced UI/UX experience
  ◊ Ad creative reuse
  ◊ Various Zero Knowledge service integrations (see ZK section)
  ◊ eCommerce

(d) Brand Experience

The brand experience across the platform will be expanded and improved for v2.0. This includes new features detailed below and a list of general improvement to the brand portal.

(i)   White Label Profila

In talking with brands in various industries, we understand the need to make the myriad of features for brands to be separate modules that can be aggregated in different forms for different purposes. This blended approach will allow a brand to integrate key Profila features (data subscriptions, privacy assertions) into their own mobile apps and websites. It provides a brand the opportunity to control the customer experience while still providing their customers with features that allow them to manage their own data, preferences, and sentiments. Our white label initiative will allow for variations on what Profila features are enabled and how the integration can be best accomplished.

(ii) Spotlight

One of the great advantages of the Profila consumer experience is to remove the noise that brands find themselves competing with on social media channels and their customers' email inboxes. The personal feed for an individual in Profila is already unique in that all of the content is targeted specifically at that individual (and according to their Metronome rules) but also because there is no current social sharing aspect. Version 2 of our personal feed will shine an even brighter spotlight on each post; by using each scroll from an individual to put a single post full screen combined with an enhanced ability to let individuals engage with the content, provide instant sentiment capture, and empower brands to create dynamic experiences for their best customers. Each targeted post by a brand will take center stage.

(iii) Multi-brand Integration

Many of the brands we talk to are really an umbrella for several brands in the same space; each with their own customer personas and each requiring different uses on Profila. One feature we will be developing is the ability for larger organizations to manage multiple brands in a single Profila environment; allowing them to manage access to each brand (either for internal brand managers or even for external agencies), share content, visual assets, and target lists. It will also enable cross-brand dashboards for analytics and insights.

(iv) Live Personas

One of the most powerful features in Profila v1.0 is our dynamic segmentation lists. It enables brands to create incredibly targeted and dynamic lists of their customers through zero party demographic and psychographic insights. These lists are always updating themselves to include those matching the intended criteria. Live Personas takes that even further, providing a full dashboard experience to monitor the marketing efforts for specified groups of customers, providing an overview of customer moments, psychographic trends based on YouQ (detailed later in the roadmap), illustrate sentiment trends, and analytics on the performance of brand moments. It will be the most accurate, authentic, and valuable information about a specific target anywhere and constantly updated based on their customers' continued use of Profila.

Additional improvements to the platform consist of the following headlines:

o   Privacy
  ◊   Audit logs & consent management
  ◊   Privacy management dashboard
  ◊   Breach notification management
o   Data & Insights
  ◊   Psychographic insights dashboard
  ◊   Industry insights dashboard
  ◊   Consumer sentiment dashboard
o   Advertising & Communication
  ◊   Global brand channel enablement
  ◊   User moment and content management
  ◊   Support / helpdesk triage management

6.2 Cardano Integration

(a) Catalyst Fund 5 – Data Subject Rights Ledger – digital service available on Cardano blockchain (the "Privacy Ledger")

Profila's rights management functionality is already implemented on the Cardano blockchain as part of the Catalyst[36] challenge (fund 5 "metadata"). Our funded project – called "Control your data – privacy ledger" is committing (hashed) information from this transaction onto the Cardano blockchain, in order to provide proof for future reference. More details about the project can be found via the link in the footnote below[37].

Profila

(b) Catalyst Fund 6 – Metadata, (d)App, Atala Prism and NFT

Additionally, there are several areas mentioned elsewhere in this roadmap which will include integration with Cardano technology and Atala Prism. They include:

Data Protection
o   Authentication, security and encryption
o   Data flow consent management middleware, GDPR, HIPPA compliance
o   Digital ID / zero knowledge proofs
o   Privacy contract blockchain
o   Personal database decentralization
Platform & Technology
o   Subscription wallet payout (Fiat and/or crypto)
o   Data asset tokenization
o   Privacy-preserving encrypted analytics.

Please consult our ICO website https://ico.profila.com for the most recent update on all of our Cardano-related projects on Project Catalyst.

(c) Catalyst Fund 7 – Zero Knowledge Token integration in the app

Profila's proposal to integrate its zero knowledge token into the app as per the token utility explained above in chapter 5, was funded by the Cardano community under Project Catalyst fund 7. Our funded project is called "Anonymity and Data Control with ZKT".

More details about the project can be found in our Medium article "Profila gets funded under Project Catalyst for the 5th time", see here.

There are several areas mentioned elsewhere in this roadmap which will include integration with Cardano technology and Atala Prism. They include:

Data Protection

·   Authentication, security and encryption
·   Data flow consent management middleware, GDPR, HIPPA compliance
·   Digital ID / zero knowledge proofs
·   Privacy contract blockchain
·   Personal database decentralization

Platform & Technology

·   Subscription wallet payout (Fiat and/or crypto)
·   Data asset tokenization
·   Privacy-preserving encrypted analytics.

6.3 Privacy

Together with the University of Lucerne's (HSLU) Blockchain department, and co-funded by Innosuisse – the Swiss Innovation Agency[38], Profila started the development of a smart & expert sourced knowledge base on privacy policies and privacy legislation. This project was awarded in May 2021; launched in September 2021 and is scheduled to proceed for a period of 2 years.

o   Brands hide behind legal documents to justify (mis)use of personal data, and consumers have limited tools available to understand them. Under this Innovation Project, Profila and HSLU will develop a smart knowledge base of privacy information that will help people make sense of any questions they have about these privacy policies, and link the consumer with the correct answer. In case the smart knowledge base cannot provide an automated answer to a question that a Profila user has, the user will be brought into contact with a number of privacy experts per jurisdiction. Under the Innovation Project, the smart knowledge base will be developed, include rating system and correct incentive for industry experts (via micro-payments) to respond to people's questions. Via this project, we intent to provide each individual with access to legal knowledge and legal experts, at a minimal expense.
o   After the successful end of the innovation research project in September 2021; Profila will integrate the smart knowledge base in a consumer interaction model, preferably a chatbot (the "Chatbot"). Profila users can directly ask questions to the smart knowledge base, or directly to the legal experts, about privacy. Please find below a visual representation of the Profila Chatbot:

6.4 Zero Party Data

Zero Party Data will be the fuel that powers the next generation of marketing excellence. Instead of relying on surveillance tactics and observed behavior which is often misinterpreted if not incomplete, ZPD will empower individuals to capture the most accurate, authentic, and valuable insights about themselves via self-discovery YouQ questions, and allow them to decide who has access to what insights, and what can be done with them. Individuals are the gatekeepers, and brands benefit from high quality, evergreen insights about their best customers. Win win.

Downstream, the Profila platform will be creating a range of data products which benefit the individual as they see fit while allow brands to know those individuals better and through their own eyes.

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[38] **Legal Disclaimer** – Please note that Innosuisse is merely a sponsor of the Smart Knowledge Base research project awarded to Profila GmbH and HSLU, and that Innosuisse is not part of or endorsing the Profila ICO.

(a) YouQ

At the center of the zero party insights engine is YouQ; a fun, gamified environment where individuals can answer a single question or many, knowing that each answer increases the value of their Profila and the power of the insights for themselves and to brands they choose to share those insights with for their benefit. YouQ is based on the natural human joy in answer questions about themselves and learning more in the process. YouQ will be accessed from any part of the Profila platform. An individual can answer as many random questions as they wish (perhaps during a short gap in their day) while also allowing them to take a question they like and dive deeper into that specific category. Individuals will also be informed as they get closer to achieving badges, completing categories or fact sheets, or other achievements.

(b) Fact Sheets

We all have what we call micro-preferences when it comes to many parts of our lives. Often, these micro-preferences are not shared and not being fulfilled can cause frustrations. Fact Sheets are defined collections of specific answers to specific questions which allow a subscriber to understand these micro-preferences without needing to ask.

As an example: an individual may have preferences for what makes a good experience for them at a hotel; a room with a view, away from the elevator. Perhaps because of religious or personal reasons they do not want alcohol available in the minibar. Their act sheet may include their dining preferences, what kinds of exercises they do (matched with available hotel services) and any special needs which may be sensitive. As a brand loyalist to one of the larger hotel operators, this individual can give access to this Fact Sheet when they make reservations so that the specific property has them and can act on these preferences in order to delight their customer.

(c) Brand-specific YouQ

Most of the insights a brand needs to target an individual with relevant and consensual ads will be found in YouQ; the massive collection of questions and answers on a variety of topics. But often a Brand also needs to understand an individual's sentiment and preferences for their specific offer. Brand-specific questions can be part of a subscription offer, asking individuals to complete questions regarding, for instance, which products or product lines the individual currently purchase, which brands they have an interest in, or insights into how they discovered the brand, as well as general sentiment.

(d) Next-Gen NPS

Net Promoter Score is an industry standard for taking a snapshot of an individual's sentiment regarding a brand in a moment in time. It is an industry standard but it always felt inadequate to really drive insights and decision making. Profila's Next-Gen Sentiment Engine will allow Brands to work periodic sentiment capture into their subscription offers and also provide individuals with a more multi-faceted way to capture true sentiment and intent. By capturing why sentiment has changed over time (with simple feedback questions), a brand can have a much more comprehensive view of how their customer's journey can be improved and customer retention and total lifetime value maximized.

6.5 MarketPlace

The core of the Profila platform is made of consensual and transparent relationships between individuals and brands. But what if someone has a need, a want, a desire, or just want to discover something new? The Profila MarketPlace will be a safe space where individuals can discover new brands, new products, and new services that match their needs. And because it's Profila, individuals will be empowered to manage and control their experiences in the MarketPlace; ensuring their privacy and integrity of the insights they share.

In all the examples below, the cross-platform services of Zero Knowledge and Metronome are available to individuals to stay anonymous (or near anonymous) in all of the MarketPlace activities as well as manage the flow of offers and content from the activities they engage in, in the MarketPlace.

o   Profila will develop a privacy-first marketplace where Profila users can post anonymized "personae's" or Avatars, which allow for both individuals and brands to discover each other in an anonymous way until both parties agree to the terms of their interaction (under the terms of a data subscription).

o   An individual can create an Avatar meant as a buying signal; for instance, the desire to purchase a new automobile. This Avatar would not only include the need and timing of their purchase, but would also be coupled with data and insights from their Profila that will prove useful to a brand intending to respond to that buying signal (example: lifestyle insights to understand if the individual has children, pets, their hobbies, and other relevant data points for the kind of automobile which will serve that individual's lifestyle). These kinds of Avatars are referred to as Transactional Avatars; intended only for a specific need and a specific moment with no necessary interaction after the transaction is completed.

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o   In contrast, the second kind of Avatar is built and deployed by an individual when they are seeking to discover new brands that they would not have known about otherwise with the intention of creating a longer-term relationship of continued and repeated products and services. Imagine an individual is interested in a new hobby or lifestyle and desires to find brands that provide products and services for that hobby. An Avatar can include the relevant information to inform brands that this individual is part of their target market and provide the brand enough details to provoke a subscription offer for a relationship between two known entities (an individual and the brand). An individual can create and manage an unlimited number of Avatars and define how they will operation in the Marketplace.

E.g. you would like new running shoes. You create an anonymized Avatar in the Profila App and include as relevant elements "sport shoes"; for a "30 years old"; "male", with "shoe size 45". Each company that sells sport shoes for grown men with a size 45 can now send offers to your Avatar with special discounts. From the 5 offers you receive; you choose the offer from Nike. Only then can Nike know who you are in order to send you the shoes.

(a) Buying Signals

An individual can provide a need or want to the MarketPlace through a wizard-like process and receive offers. But more than that, each signal type (such as a new automobile) will have a Zero Party profile that will provide competing brands with much more insights into the context of the buying signal. For instance, in the case of an automobile, the signal can specify which market it must be available in, type of transaction, and most importantly, key lifestyle insights gained from YouQ that are situationally relevant (in this case, size of family, pets, hobbies, other considerations such as eco-preferences). Buying signals will be warm leads for any brand and put the individual in charge.

(b) Avatars

If an individual wants to discover new brands, they can create an Avatar; which is a collection of demographic and psychographic insights, and make it available on the MarketPlace to be matched with Brands looking for new customers. For instance, an individual creates an Avatar which includes their age, gender, and country, as well as the zero-party insights regarding their fashion preferences. In the MarketPlace, a brand can set up an Automated Acquisition service which looks for Avatars that match the kind of customers they hope to acquire. Using ScoreCard (detailed below), both parties can then consent to the kind of relationship that works for them (ranging from zero-knowledge to a subscription offer).

An individual can create an unlimited amount of Avatars and manage them easily; pausing some or all when you aren't in the mood for discovery, or responding to Sidekick suggestions on potential Avatars based on your YouQ insights.

(c) ScoreCard

One challenge in the modern internet is how to give both parties; individuals and brands, objective metrics for them to judge the reliability and attractiveness of the other before consenting to sharing insights and preferences. Reviews can be unreliable (and easily gamed). With ScoreCard, the MarketPlace will provide objective metrics which can aid in making decisions on the MarketPlace. For example: when reviewing the responses to a new Avatar, an individual can see metrics per brand about their behaviour and performance on the platform, such as: what percentage of subscriptions were revoked within 60 days (a sign the brand experience was poor), average number of brand moments sent per month (a sign of potential content spammers), and other metrics we'll develop as we evolve. For brands, ScoreCard can help them to judge the veracity of a potential customer; their level of identity verification (bots have no place in our platform), engagement levels with existing brand relationships, and more.

(d) Milepost

The big changes in our lives can be intimidating, moving to a new city, getting married, starting a family or a new career. Milepost is an organized collection of both Avatars and buying signals that capture all the possible needs and wants when making one of these big life changes. Registering a Milepost event (such as having a new baby on the way) starts a process where your demographics and psychographic insights are matched with a self-selected set of content, products, and services to aid you along that specific journey. And as always with Profila, the individual can manage the details and control the flow of offers from start to finish..

(e) Dates and Sizes Registry

Imagine creating a list of important dates throughout a normal year; your partner's birthday, your anniversary, your parent's birthday and so on. An individual can then attach insights to each date and even assign a Bundle of brands that will have access to that date and it's significance (as always, in zero-knowledge environment if desired). For instance, your partner's birthdate is 15 October. Your Registry setting has access to your partner's clothing sizes and personal style. You allow a specific Bundle of brands (even a Bundle your partner manages in their Profila) to provide exclusive offers 6 weeks before the birthday, giving you time to make a selection and order. Or, you could have this Registry item create a buying signal put into the MarketPlace. We may save a lot of marriages with this feature!

6.6 Zero Knowledge Services (Insights & Advertising)

As detailed elsewhere in this white paper, Zero Knowledge rests of the premise that an individual can initiate a desire for a product or service and have that need met without rendering any personally identifiable information. The need is met with zero knowledge being acquired by the provider of the required product or service or an offer for such (in the form of an advertisement). Our ZK services will be extended to any and all feature for individuals in order for them to make, on a case-by-case basis, a choice whether to provide any personal information to a brand or whether to stay completely anonymous. This can be extended, based on need or increased trust, to include Minimal Knowledge (such as a mailing address required to ship a product to the individual) which is provided just-in-time and then expires. In both cases, the individual's need is matched with available offers in a kind of black box, with no light escaping in the form of personal data. The matchmaking occurs out of site of a brand achieving a zero-knowledge situation.

Zero Knowledge Services will play an important part for In Real Life scenarios as the Profila platform expands. One can easily imagine scenarios such as COVID certificates required in certain situations (where the fact that a valid certificate exists without needed to divulge the individual), contact tracing, sporting and music events. The scenarios where the Profila platform can pull back the need for extensive and unprotected sharing of personal data are almost endless. In most scenarios a zero knowledge or minimal knowledge fills the requirement of all parties.

o   In cooperation with the University of Madrid II, Profila is developing a framework for what we call "Zero Knowledge Advertisement and Insights" or Zero Knowledge Advertising. Please consult the ZKA Research Paper on our website, https://ico.profila.com.

o   Using zero-knowledge proofs, Profila will allow a Brand to target the "perfect" consumer (meaning to the exact target audience consumer, which exactly matches the specific offering/message a brand wants to share), without the sharing of ANY personal data of a Profila user with the Brand (=user anonymity).

o   An individual (who is a Profila user) can choose to browse the internet anonymous via a peer-to-peer network of other Profila users that (help) hide his/her identity towards advertisers and publishers. Each peer in the network who participates to keep the anonymity of another Profila user will receive a small amount of ZKT deducted from the advertisement income Profila receives.

o   There is an almost unlimited number of real-life scenarios where Zero Knowledge Services can be applied; where information, status, or access of an individual is verified in Profila (on the device) and can share that status and defined data with an external scanner. Examples include verifying vaccination status when traveling, contact tracing for restaurants, entrance to ticketed events, etc.

6.7 The planned use of funds collected, and resources allocated

The funds will be used to (further) develop and build out the elements mentioned in the roadmap of this White-paper. Depending on the amount received during the ZKT Sale (with a Soft Cap of 1.5 million EUR and a Target Raise of 5 million EUR), we will be able to further develop different stages of the project over a period of 18 months (in case of 1.5 million EUR raise) up to 3 years (in case we reach (close to) the Target Raise of 5 million EUR).

Budget Allocation [37]:

•   Technical Development and Infrastructure (estimated 40% of proceeds). This budget item will cover a team of 10-15 software engineers – lead by our CTO Rajasekaran Yogarajah – to develop the features set out in the roadmap. In addition, this budget also covers all of the infrastructure costs for developing the roadmap and deploying the functionalities in the Profila App and Brand Dashboard (including hosting, backend services, etc).

•   Support Team and Staff (estimated 30% of the proceeds). This budget item will also cover the current leadership team of 6 people at acceptable industry rates (Shawn Jensen, Luke Bragg, Michiel Van Roey, Ipek Sahiner, Michael Rava and Rajasekaran Yogarajah). We will hire our existing team of volunteers and contractors engaged with onboarding, sales, & marketing, as well as other operational/support functions, a management assistant as well as a data privacy officer (est. 15 FTE staff).

•   Contractors and advisors (estimated 5% of proceeds). This budget item will focus on third-party engineering, promotional work, growth hacking, public relations, and affiliate program partnerships. A part of this budget goes to certain service providers who help to make the token offering a success (e.g., legal advisors, KYC service providers, platform etc.)

•   Marketing (estimated 15% of proceeds). This budget item will be used for marketing to expand awareness and adoption of the Platform, among users and brands. It will also be used for broader development, growth, and maintenance of the Profila community.

•   Administration (estimated 5% of proceeds). This budget item will entail legal, accounting, and other professional services fees; physical infrastructure and security costs; and associated administration costs.

•   Contingency (estimated 5% of proceeds). This budget item is intended as a reserve to address unforeseen costs.

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07. ZKT TOKENNOMICS – DISTRIBUTION AND SALE

Profila will create 500 million ZKT, which will be distributed as follows:

	In Tokens	in %	Initial Unlock %	In Tokens	Cliff	Vesting	USD price
Pre-Seed Round	40.000.000	8,000%	0,00%	0	3	15	$0,022
Seed Round	40.000.000	8,000%	5,00%	2.000.000	3	15	$0,030
Private Round	50.000.000	10,000%	7,50%	3.750.000	3	15	$0,045
Public Round	10.000.000	2,000%	20,00%	2.000.000	0	4	$0,075
Team	75.000.000	15,000%	0,00%	0	6	24	
Service providers	15.000.000	3,000%	0,00%	0	3	24	
Advisors	25.000.000	5,000%	0,00%	0	5	24	
Marketing	50.000.000	10,000%	0,00%	0	1	24	
Liquidity & listing fees	30.000.000	5,000%	35,00%	10.500.000	1	6	
Development	50.000.000	10,000%	0,00%	0	1	24	
Ecosystem Rewards	150.000.000	23,000%	0,00%	0	0	36	
Referrals & Airdrops	5.000.000	1,000%	3,00%	150.000	0	48	
	500.000.000	100,000%	3,68%	18.400.000			

28% of the total supply or 120 million ZKT will be made available during the private and public rounds (8% in the pre-seed round, 8% during the seed round, 10% during the private round and 2% during the public round).

Before the Sale Period begins, the Smart Contract System will create and directly release a (i) pool of 115 million pre-allocated ZKT (23% of the total supply) to Profila's pool for ecosystem rewards (the "User Incentive Pool") which will be made available for Profila users as per the token utility explained in chapter 5 and (ii) an amount of 75 million pre-allocated ZKT to the Profila team and investors (15% of the total supply), advisors and service providers (8% of the total supply) (together, the "**Profila ZKT**").

7.1 With which cryptocurrencies (or legal tender) will the ZKT Sale be financed and how?

Profila will accept the purchase of ZKT in exchange for the Cardano token ADA; bitcoin BTC, stablecoin USDT, and Ethereum (ETH). In addition, the fiat currencies euro (EUR), US Dollar (USD) and Swiss Francs (CHF) will also be accepted.

7.2 ZKT Price

The token price is set as follows, but can be subject to change:

Pre-Seed Round	$0,022
Seed Round	$0,030
Private Round	$0,045
Public Round (occam.fi)	$0,075

Profila will determine the day-price in EUR/CHF/USD (for those paying in fiat) or in ADA/USDT/ETH/BTC (for those paying in crypto-assets) that has to be send to Profila's smart contract system/wallet address, in order to acquire 1 ZKT, by making use of an industry standard open API, e.g. Binance https://api.bi- nance.com/api/v3/ticker/price?symbol=ADAEUR, or Coincapmarket to determine the price at the time the user wants to send the token.

There is no Sale price for Profila ZKT, which is created by the Smart Contract System and pre-allocated to Profila before the Sale Period. All ZKT will be of equal value and functionality.

7.3 Commencement and Duration of the ZKT Sale

The ZKT Sale started on 29 November 2021 (start pre-seed round) and consists of 4 separate rounds, namely a pre-seed, seed, private and public round. The end of the ZKT sale (public round) is foreseen in April/May 2022 (the "Sale Period"). However, this is subject to change based on many elements such as market conditions, development progress, private round progress etc. For the latest information about the Sale Period, consult the ZKT website at https://ico.profila.com.

If less than 1,5 million USD worth of ADA-BTC-ETH have been received by Profila during the Sale Period (the "Soft Cap" or "Threshold"), each purchaser will have the possibility to ask for a refund (although this is not a right, see below in section 7.2). The target raised for the ZKT Sale is 5.080.000 USD ("Target Raise"). The hard cap will be 5.475.000 USD ("Hard Cap").

If, during the Sale Period, the Hard Cap is reached, no additional ZKT will be sold. For anyone who transferred EUR/CHF/USD (for those paying in fiat) or ADA/USDT/ETH/BTC (for those paying in crypto-assets) to Profila's

smart contract system/wallet address after the maximum amount is reached, the funds will be reimbursed. Profila will work with a "first come first served" strategy based on the time an amount of EUR/CHF/USD (for those paying in fiat) and ADA/USDT/ETH/BTC (for those paying in crypto-assets) is received from individual wallets.

7.4 Procedures for Buying and Receiving ZKT

In order to receive the ZKT you purchased you must have an ADA wallet that supports Cardano native tokens. Profila reserves the right to prescribe additional wallet requirements. The following wallets are "multi-asset (MA" support wallets that can store native tokens such as the ZKT token: (i) Daedelus https://daedaluswallet.io/, and (ii) Yoroi - https://yoroi-wallet.com/#/, (iii) CCvault - https://ccvault.io/ , (iv) Nami - https://namiwallet.io/ and others

Approximately forty-eight (48) hours prior to the commencement of the Sale Period, Company will publish an ad- dress for the ZKT Sale via https://ico.profila.com.

To initiate a purchase of ZKT during the Sale Period, you must send an amount of EUR/CHF/USD (for those paying in fiat) and ADA/ETH/BTC (for those paying in crypto-assets) to a fiat address or ADA/USDT/ETH/BTC purchase address (the "ZKT Token Addresses") that will be provided to you only after (i) you agree to the token Sale terms by clicking the "I Agree with the Terms – View the ZKT Token Address" button on the token Sale platform from our partner Altcoinomy SA and (ii) you fulfil all requested steps and pass our anti-money laundering ("AML") check and Know-Your-Customer (KYC) process. ZKT onboarding instructions can be downloaded via https://ico.profila.com.

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EUR/CHF/USD (for those paying in fiat) and ADA/USDT/ETH/BTC (for those paying in crypto-assets) must be sent to the ZKT Token Addresses during the Sale Period in order to purchase and receive ZKT.

Sending EUR/CHF/USD (for those paying in fiat) and ADA/USDT/ETH/BTC (for those paying in crypto-assets) to any other address may result in loss of EUR/CHF/USD (for those paying in fiat) and ADA/USDT/ETH/BTC (for those paying in crypto-assets). Attempted transactions to purchase ZKT will be rejected if EUR/CHF/USD (for those paying in fiat) and ADA/USDT/ETH/BTC (for those paying in crypto-assets) is sent to the ZKT Token Addresses before or after the Sale Period.

After purchasing ZKT, you can register an account on our ZKT dashboard and see your balance of ZKT there. You can login to your dashboard via the Profila website.

The Profila website https://ico.profila.com has a document under the "downloads" section called "onboarding instructions" that explains to you all the steps you need to take to see you ZKT balance in the Profila App. During the vesting period, you will not be able to dispose of the ZKT. The vesting period duration is set out in this Whitepaper.

The smart contract system is deployed by Profila GmbH from Switzerland and is programmed so that all transactions it executes will be executed in Switzerland. As such, title to, and risk of loss of, ZKT created and delivered by the Smart Contract System passes from Company to purchasers in Switzerland.

7.5 User Incentive Pool

Of the 500.000.000 ZKT created, 23% of the total ZKT supply or 115.000.000 ZKT will be allocated to an incentive pool called the "User Incentive Pool", which we will administer to incentivize use of the Platform.
The User Incentive Pool is intended to reward early users

of the App for activities as described earlier in the token utility section in chapter 5.

In the months after the ZKT Sale public round, Profila will be incentivizing the early adopters of the App to explore the app and its features via a monthly campaign which will include very specific actions to tick off. In case you succeed in following all the instructions, you will receive your ZKT reward.

Please take into account that Profila has the right to change these amounts allocated by the User Incentive Pool at any time, extend the incentive period or even shorten or immediately halt the incentive period at its own discretion.

7.6 How much money (in EUR) is the ZKT Sale intended to raise?

Profila intends to sell ZKT for an amount between 1.5 million USD (Soft Cap) The target raised for the ZKT Sale is 5.080.000 USD ("Target Raise"). The hard cap will be 5.475.000 USD ("Hard Cap").

7.7 ZKT token release dates

The ZKT sold during the Sale Period will be released as follows:

	Cliff	Vesting
Pre-Seed Round	3	15
Seed Round	3	15
Private Round	3	15
Public Round (occam.fi)	0	4

08. RIGHTS AND OBLIGATIONS

8.1 Subscription terms and conditions

The terms and conditions that apply to the purchase of ZKT are set out in the Token Sale Terms and Conditions: Zero Knowledge Token, version 1.1 dated 26 August 2021 (hereinafter the "ZKT Terms"), made available on our website https://ico.profila.com/, during the onboarding platform as part of the Token Sale.

The purchase of ZKT during the ZKT sale period (the "Sale Period", see infra, 6.3) from Profila is subject to these ZKT Terms. Unless otherwise stated therein, the ZKT Terms govern only the purchase of ZKT from Profila during this Sale Period.

If you have any questions regarding the purchase or use of ZKT, or any provision contained in these Terms, please contact the Company via info@profila.com.

The content of this whitepaper, the website https://profila.com (the "Website"), the ICO-specific website https://ico.profila.com or any social media or community channel managed by Profila (e.g. Twitter, LinkedIn, Medium, Telegram, Discord)(the "Social Media and Community Channels") and public statements made by Profila or any of its representatives or employees, are non-binding and are subject to change by Profila at its sole discretion and do not form an integral part of the ZKT Terms.

8.2 The rights and obligations attached to the Profila utility token

The ZKT token only grants the acquirer a right to access the Profila App, and use the different services provided on and via the Profila App as discussed above in the ZKT token use cases.

As explained in article 3.3 of the ZKT Terms, *"ownership of any ZKT carries no rights, express or implied, other than the right to use ZKT as a means to obtain the Profila Services or access the Platform as described non-exhaustive in the ZKT Token Use Cases.*

In particular, you understand and accept that the ZKT do not represent or confer any ownership right or stake, share or security or equivalent rights, or any right to receive future revenue shares, intellectual property rights or any other form of participation in or relating to the Platform, and/or Company, other than rights relating to the use of the Services and of the Platform, subject to limitations and conditions in these Terms and applicable Platform Terms.

ZKT are not intended to be a security, commodity or any other kind of financial instrument."

All token purchasers must be accepted by Altcoinomy during the AML/KYC onboarding process and will be subsequently documented (first and last name; place of birth/citizenship; place of residence).

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8.3 Are there any restrictions regarding investors?

Yes, the ZKT Terms include country restrictions in section 4, point 2, with several "restricted countries" and "excluded countries".

Residents and/or nationals from the excluded jurisdictions will not be allowed to acquire ZKT during the ICO (e.g., Embargo countries). We are taking technical measures to make sure people from the excluded jurisdictions cannot participate in the token sale. These restrictions will be enforced by Altcoinomy in the framework of the AML/KYC process. In certain restricted jurisdictions, there are also restrictions as to the type and number of person(s) / legal entity(ies) that are allowed to acquire ZKT. This will also be enforced during the AML/KYC process.

Please find a detailed explanation thereof in the ZKT Terms on our website https://ico.profila.com/.

8.4 How and where can the token be acquired or sold after the issue?

Apart from the ZKT Sale, the ZKT can be acquired by market participants using the Profila App as discussed above.

At the moment of the ZKT Sale, ZKT are intended to be used solely on the Platform.
Secondary trading of ZKT might be facilitated by third party exchanges (centralized), or decentralized exchanges might allow for the swapping of ZKT to ADA.

8.5 Refund mechanism in case the ICO is cancelled

The purchase of ZKT from Profila during the Sale Period is final, and there are no refunds or cancellations except (a) as may be required by applicable law or regulation, or (b) in case you breach any of the representations and warranties as set out in article 4.1 of the ZKT Terms, or (c) in case you breach any of the sales restrictions as set out in article 4.2 of the ZKT Terms.

We reserve the right to refuse or cancel ZKT purchase requests at any time in our sole discretion, or in case your purchase of ZKT breaches these Terms, although we acknowledge the right of withdrawal foreseen in article 14 of the Proposed MICA Directive, and might grant it to you – at our sole discretion and taking into account the circumstances and our costs incurred – following your express written request to legal@profila.com.

8.6 Applicable law and competent courts

The purchase of ZKT during the Sale Period will be governed by and construed and enforced in accordance with the laws of Switzerland and Belgium depending on the location you acquire tokens from, without regard to conflict of law rules that would cause the application of the laws of any other jurisdiction (article 5 ZKA Terms).

Residency/Nationality	Applicable Law
Switzerland and rest of the world	Swiss law
European Union	EU law (where applicable) and Belgian law

Any Dispute between a purchaser of the ZKT and Profila arising out or relating to these ZKT Terms, or its subject matter or formation is subject to arbitration clause as detailed in article 4.12 of the ZKT Terms.

09. CARDANO TECHNOLOGY AND WALLETS

9.1 Cardano technology

Cardano is a proof-of-stake blockchain platform: the first to be founded on peer-reviewed research and developed through evidence-based methods. It combines pioneering technologies to provide unparalleled security and sustainability to decentralized applications, systems, and societies.

With a leading team of engineers, Cardano exists to redistribute power from unaccountable structures to the margins – to individuals – and be an enabling force for positive change and progress.

Please find below some more information about Cardano (see this section 8.1., subtitles a-e), which come directly from the Cardano official webpage (Copyright Cardano - https://cardano.org/)

(a) Proof-Of-Stake and Ouroboros

Ouroboros is the first peer-reviewed, verifiably secure blockchain protocol, and Cardano is the first blockchain to implement it. Ouroboros enables the Cardano network's decentralization and allows it to sustainably scale to global requirements without, crucially, compromising security.

(b) Evidence based development

Cardano is developed using evidence-based methods: a novel combination of formal methods, which are normally found in critical high-stake applications, and an agile approach, which helps the project remain adaptable and responsive to emerging requirements and new innovations. To support global applications, systems, and solutions, we believe security assurance is not a choice: it's a requirement. Our protocol implementations and platform integrations are first researched, challenged, and mathematically modelled and tested before they are specified. These specifications then inform development which, in turn, is independently audited. The result is a codebase offering an unrivaled level of assurance.

(c) Secure

Cardano makes it possible for any actors that do not know each other - and have no reason to trust one another - to interact and transact, securely. It's a platform for building trust where none might naturally exist, opening up whole new markets and opportunities. Through Ouroboros, Cardano is provably secure against bad actors and Sybil attacks. Every transaction, interaction, and exchange are immutably and transparently recovered, and securely validated using multi-signature and a pioneering extended UTXO model.

(d) Incentivized participation

With a committed community at its core, Cardano is an open-source project developed through open participation. To ensure the longevity and health of the network, Cardano features an incentive mechanism that rewards users - either as stake pool operators or stake delegators - for their participation. The platform is built and expanded through enhancement and improvement protocols. Cardano's governance system gives everyone a democratic voice; ADA holders can submit or vote on proposals to upgrade the platform or help determine the direction of development. The governance model uniquely positions Cardano for future growth and development and allows it to introduce new capability tailored to its user's needs. It ensures Cardano and its community can continuously fund and decide upon platform and ecosystem improvements.

(e) Scalable and sustainable

Ouroboros allows Cardano to scale to global requirements with minimal energy requirements. Unlike other blockchains, Cardano does not require exponentially more energy to increase performance and add blocks. The performance-sustainability balance is achieved through a combination of novel approaches, including multi-ledger, side chains, and parallel transaction processing through multi-party state channels.

The network proliferates as the number of stake pools increases, while parameters are set and adjusted to measure the attractiveness of specific stake pools. This is a network that rewards participation directly. Cardano is designed to ensure that those who act in the best interests of the network are also acting in their own best interests. This ensures the development of a healthy ecosystem, and, in turn, the endurance, health, and robustness of the network, now and into the future. The combination of sustainability and scalability allows Cardano to achieve the throughput required to meet the evolving demands of global systems: financial, logistics, identity, societal.

(f) Future developments

More information about the Cardano developments can be found on the Cardano roadmap, accessible on their website via https://roadmap.cardano.org/en/.

9.2 Cardano native tokens

Native tokens are a new feature that enables the transacting of multi-assets on Cardano. Users can transact with ADA, and an unlimited number of user-defined (custom) tokens natively.

Native support offers distinct advantages for developers: there is no need to create smart contracts to handle custom tokens, for example, which removes a layer of added complexity and potential for manual errors since the ledger handles all token-related functionality.

The native tokens feature extends the existing accounting infrastructure defined in the ledger model (originally designed for processing ADA only transactions) to accommodate transactions using a range of assets. These assets include ADA and a variety of user-defined custom token types.

For more information on the creation of a native token on Cardano, read "Get Started With Native Tokens" https://docs.cardano.org/en/latest/native-tokens/getting-started-with-native-tokens.html

9.3 Compatible wallets

The following wallets are "multi-asset (MA" support wallets that can store native tokens such as the ZKT token: (i) Daedelus https://daedaluswallet.io/, and (ii)Yoroi - https://yoroi-wallet.com/#/

A. Multi-asset (MA) support is the name of a feature set (functionality) that a ledger (blockchain/wallet/cryptocurrency/banking platform) can provide, which allows it to do accounting on or transact with more than one type of asset.

With MA support, the user's wallet will be able to contain multiple types of assets in a single output, i.e., the wallet can contain a token bundle. This means that wallets can contain (i) assets scoped under different policies in a single UTXO (including ADA), and assets scoped under one policy, spread over multiple UTXOs.[42]

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[42] For a more detailed explanation, see "Native Token FAQ" in Cardano Documents https://docs.cardano.org/native-tokens/faqs.

10. COMPETITORS

In the analysis of the competition to Profila, we first compare the overall Profila platform as a consumer data management app (as described above) with some competing projects that also allow consumers to manage their personal data (see below, section 9.1). Second, we also compare Profila's innovative Zero Knowledge Advertising technology – as a post-cookie Ad-Tech solution – with other privacy-preserving advertising solutions, namely Brave, Google FLOC, and PIMs (see infra, section 9.2).

10.1 Competitor analysis – consumer data management app

Profila is positioning itself as an over the top (OTT) opportunity in people-centric customer communications across four markets of (i) privacy management, (ii) data management & marketplaces, (iii) advertising & consumer content and (iv) marketing & customer relationships (CRM).

Profila is fundamentally different, as it seeks to educate and empower consumers, in order to improve the interaction and relationship with Brands. Profila is a category defining permission-based customer relationship and marketing platform that spans four industry verticals with a solution designed for people, and delivering value to brands globally, without the need for surveillance.

Illustration 10

Profila
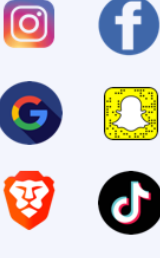
10.2 Competitor analysis – privacy-preserving advertising solutions

In this subsection we describe Google FLOC, Brave and PIMs, since, as we have discussed above, they are the most relevant privacy-preserving advertising solutions proposed so far.

(a) Brave – passive zero knowledge advertising

Brave is a company whose main product is the web browser with the same name. Brave browser was first released in November 2019. The differential characteristic offered by Brave compared to other existing browsers is that it is a privacy-preserving browser. It blocks all ads and third-party trackers without affecting end-persons experience while surfing the web.

The business model of Brave is advertising. It offers their people an opt-in option to activate ads in Brave. People doing so would receive ads. There are two important differences with respect to other browsers: 1) Brave compensate each individual Brave browser user for each delivered ad with its own cryptocurrency named Basic Attention Token (BAT); 2) the type of ads offered by Brave are non-invasive ads in the form of notifications that appear in the right upper corner of the screen. While significantly less intrusive than display or video ads, it is not clear the marketing efficiency of these types of ads.

Brave ads are targeted ads. The browser uses the web sites visited by a user in order to infer their interests and preferences. However, this information stays local in the browser, and it is neither shared with third parties nor even with Brave's own back end. Instead, Brave collects a pool of ads from the ad campaigns available and sends them to the browser instances. Hence, the match of the user's profile to the most suiting campaign is computed locally in the browser instance. This is a change to the current programmatic advertising paradigm where the profile of the user is sent through several third-party platforms to reach DSPs where the match between the ad campaigns and the user's profile is executed.

Brave is, to the best of our knowledge, the closest to a Zero Knowledge Advertising (ZKA) system that has been implemented so far. However, Brave still requires revealing the IP address of the device for some of its operation . Note that the IP address has been identified by GDPR as Personal Data. Despite Brave claims that they do not record or share the IP address with third parties, this fact prevents us to consider Brave a full ZKA solution.

In summary, Brave offers a walled-garden, passive(almost) ZKA system which delivers non-invasive ads whose marketing efficiency is still largely unknown. It compensates people for the received and clicked ads. Finally, in the context of this paper, it is important to highlight that the approach followed by Brave leaves people out of the decision loop, in the sense that it does not give people the option to share their data with certain advertisers (or third parties) even if the user is willing to do so. Even if Brave would be able to mask people's IP addresses and become a full ZKA solution (e.g., in future upgrades of their solution), we still consider brave to be only a "Passive" ZKA solution, that patronizes its users by showing them ads that Brave thinks each individual will like. This stands in strong contrast with the "active" or "user-centric" ZKA solution we present in this paper, that puts the consumer at the steering wheel, in full control of the ad transactions.

As we will discuss latter on, this pure ZKA approaches are to some extent patronizing people on the best way of handing their own data that consists in not sharing it with any third party. However, this concept differs from the overall data protection spirit reflected in new data protection legislations that combines the concept of privacy and consent. Only the combination of these two concepts provides people true control over their own data. Ideally, we build a solution in which tracking is not possible, as by default ZKA is used, unless the user provides voluntarily and consciously explicit consent to a given third party or advertiser to have access to some of their data for a limited duration and a clearly defined purpose. In this case, the referred third party or advertiser can lawfully process and use the data under the agreement reached with the user.

(b) Google's FLOC

The announcement by Google that Chrome was expected to cease the use of third-party cookies by beginning of 2022 was the event that triggered the transition of the Ad Tech ecosystem into the post-cookie era. Note that Google Chrome represents roughly 2/3 of the market share of both fixed and mobile browsers. So, in essence, as long as Google Chrome is still allowing third party cookies, the ad tech ecosystem does not need to change their tactics, even though other less popular browsers such as Firefox or Safari already ceased the use of third-party cookies.

There is a very intense debate with respect to the optimal solution that should substitute third party cookies. This solution is expected to provide all data protection guarantees defined in new data protection legislation (GDPR, CDPA) and should at the same time maintain the targeting effectiveness of the current online advertising ecosystem. Different approaches are on the table. Some of them propose the use of unique user-ids that are tightly associated to the consent concept. However, it is not clear whether the final result of these approaches will be very different from the current cookie-based ecosystem.

Given the dominant position of Google in the advertising ecosystem as well as its dominant share in the browser and OS markets, the approach supported by Google is very likely to become the de-facto standard. Surprisingly for many, Google took a radically different approach to the ones mentioned above, making a serious movement towards privacy. Google proposed Federated Learning of Cohorts (FLOC) as the solution to be implemented by Chrome in the post-cookie era. In FLOC, the browser using the information available from the user would assign them to a Cohort. FLOC leverages the K-anonymity principle, so that it defines a minimum cohort size of K (initially Google proposed K=1000). This means, that any user would be assigned to a cohort with at least 999 other people. Hence, the data revealed from a user in the context of programmatic advertising based in FLOC is the user's cohort. Each user is assigned to a single cohort which is recomputed weekly. It is still unclear the level of detail that would define a cohort. For instance, a cohort may be as general as Sports including all people interested in sports or a much more specific cohort as Male, Age group: 30 to 40, location: California, interests: sports & automobile. The final level of detail provided by cohorts will define the tradeoff between marketing efficiency vs. privacy. General cohorts would include a very large number of people so the privacy level and marketing efficiency offered would be high and low, respectively. Instead, very detailed cohorts would include a limited number of people (e.g., as low as 1k based on Google report) providing a very similar marketing efficiency as current targeting solutions but offering questionable privacy guarantees.

However, building FLOC carefully is a very involved task which might have been the reason for Google delaying the cookie cessation from early 2022 to late 2023. Even though the details of FLOC's implementation are still largely unknown, privacy advocates and privacy-preserving players in the Ad Tech ecosystem such as Brave, are already positioning themselves against FLOC. This is largely due to the latter's inability to provide true privacy guarantees – e.g., re-identification attacks might be practically possible in FLOC –and other potential limitations such as the possibility of unintentionally lead to biases and potential discriminatory practices, e.g., form cohorts that cluster people based on race, gender, religion, etc. While we acknowledge some of the raised concerns are reasonable, it is undeniable that FLOC is a promising step towards improving people's privacy compared to current tracking activities in the current Ad Tech system.

In summary, in the context of this paper, FLOC provides a privacy-preserving solution compared to current tracking- based solutions but is far from being considered a ZKA solution. The dominant position of Google might likely achieve that FLOC (or any other proposal) becomes the de-facto standard in the ad tech industry in the post-cookie era. The

FLOC solution does not compensate people for their interaction with ads and the privacy guarantees offered is uncertain. If solid guarantees are expected, then cohorts should correspond to general audiences and thus the marketing efficiency of this solution might be questionable. Finally, as in the case of Brave, this solution could be considered a "passive" ZKA solution that patronizes citizens, in the sense that they are left out of the decision-making loop with respect to their own data.

(c) PDPs: Fine-grained consent-based advertising

Personal Identity Management (PIMs) platforms offer people the possibility to handle their personal data and decide which data and with whom to share it. In the context of online advertising, these platforms allow people to decide with which players they are willing to share data and which specific pieces of data. The result is a consent-based form of advertising. PIMs typically offer people a user interface, where people can configure their data-sharing preferences (e.g., which data are shared and with whom). Based on the persons configured privacy preferences a PIM can offer people in bulk or individually (as would occur in online advertising) to the advertisers providing all required data protection guarantees. Moreover, it is a common design choice among proposed PIMs to offer people explicit rewards in exchange of their data as, for instance, Brave does.

Consent-based advertising and PIMs are quite recent concepts that are still being covered by research projects. However, there have already been several start-ups proposing a PIM system. To the best of the authors knowledge none of them have succeeded so far.

Consent-based advertising is yet another very valid option to address ethical advertising. However, it comes as any other alternative with its limitations. Because its final goal is to share the data of people in a privacy preserving manner compliant with recent legislation frameworks, PIMS do not allow the user to choose a ZKA solution and thus stay anonymous via Zero Knowledge Advertising, while still enjoying the benefits of the ad. We consider this a very important aspect to be taken in consideration when we propose our own solution.

(d) Profila's solution – Active Zero-Knowledge Advertising

In this section we first provide a rationale for our solution and the design requirements. Then, we explicitly list the assumptions we are considering in this work. After that, we describe our solution, starting by introducing the involved players to later discuss the protocol that implements our proposal for delivering digital ads.

(i) rationale

While all the discussed alternatives represent a significant step forward to pioneering the transformation of the Ad Tech ecosystem into a more respectful solution with the end persons privacy, all these initial proposals present limitations:

- **Passive ZKA.** To the best of our knowledge there is no solution that properly mixes (active) ZKA with consent-based advertising and puts the consumer in the middle and in control, i.e., a solution that guarantees there is no data leakage if the user did not provide consent to share data but enables data sharing in those cases where the user provides explicit consent to do so. Providing people with control of their personal data is to our understanding the spirit behind most modern data protection regulations. Such a solution would provide full default guarantees to people through ZKA but would also give people full control of their data allowing them to share their data in cases where they would like to do so. Instead, approaches pursuing – what we call "passive" – ZKA, are to some extend choosing what they believe is best for the individual and taking from people their right to choose for themselves. Contrarily, pure consent-based advertising approaches (e.g., PIMs) fail to offer people the ZKA option to stay anonymous while still enjoying the benefits that a personalized ad could present to them, which in our opinion, must be the default advertising alternative.

- **Walled-Gardens.** Several initiatives (like Brave) are thought to be implemented as walled-garden solutions and limit the provided guarantees to the part of the online advertising ecosystem that operates on their platform. For instance, Brave can provide guarantees on advertising delivered through web browsers, but not in mobile apps.

  Instead, we foresee a solution that can be widespread across all sorts of publishers (webpages, video platforms, mobile apps) so that it provides data protection guarantees across the whole advertising ecosystem. In addition, many privacy-preserving initiatives such as Google FLOC do not foresee compensating people. However, our solution builds further on the rewarding proposal of Brave and other similar solutions. Similar to Brave's reward system, our solution will compensate people based on ads they received and the interaction with such ads. In addition, our solution also rewards people for their data they willingly shared with advertisers since our solution enables consent-based advertising in addition to zero knowledge advertising.

- **Auditability.** A paramount property that future Ad Tech solutions must implement is auditability. Towards this end, cryptographically based proofs have to be produced so that each stakeholder is responsible for its implemented actions and practices. To the best of our knowledge Brave is the only solution (among the discussed ones) pursuing this goal.

Therefore, our goal is to design our ZKA solution with the following requirements:

1. It provides a combination of ZKA and consent-based advertising. This solution will allow personalized advertising without sharing people's data with third parties unless an individual provides explicit consent to do so. Explicit consent needs to be provided through a user interface where people can select which data items, they are willing to share, with which third parties and for how long.

2. It is operational with all types of publishers in the online advertising ecosystem as opposed to walled-garden solutions.

3. It rewards people for both their attention and their data.

4. It must generate cryptographical proofs of all actions so all involved players and an independent external authority can conduct an auditing process.

Table 1 shows a comparison describing the main characteristics of the most relevant state-of-the art solutions described above (i.e., Brave – FLOC – PIMS) and our solution.

	Zero Knowledge Advertising	Consent Based Advertising	User's control	Multiplatform operation	Reward for users	Auditability
Brave	x				x	x
Google FLOC				x		
Consent-Based Unique ID		x		x		
PIMs		x	x	?	x	
Our Solution	x	x	x	x	x	x

TABLE 1. Summary of the characteristics offered by state-of-the-art ethical advertising proposals and our solution (the symbol "x" indicates the solution offer that property; the symbol "?" indicates that such property may or may not offer that property depending on the specific implementation.

11. RISKS RELATED TO THE TOKEN AND THE PROJECT

Important Note: As noted elsewhere in the ZKT Terms, the ZKT are not being structured or sold as securities or any other form of investment product. Accordingly, none of the information presented in this Whitepaper is intended to form the basis for any investment decision, and no specific recommendations are intended. Profila expressly disclaims any and all responsibility for any direct or consequential loss or damage of any kind whatsoever arising directly or indirectly from: (i) reliance on any information contained in this Whitepaper, (ii) any error, omission, or inaccuracy in any such information or (iii) any action resulting from such information.

By purchasing, holding, and using ZKT, you expressly acknowledge and assume the following risks:

11.1 Risk of Losing Access to ZKT Due to Loss of Private Key(s), Custodial Error or Purchaser Error

A private key, or a combination of private keys, is necessary to control and dispose of ZKT stored in your digital wallet or vault. Accordingly, loss of requisite private key(s) associated with your digital wallet or vault storing ZKT will result in the loss of such ZKT. Moreover, any third party that gains access to such private key(s), including by gaining access to login credentials of a digital wallet or vault service you use, may be able to misappropriate your ZKT. Any errors or malfunctions caused by or otherwise related to the digital wallet or vault you choose to receive and store ZKT, including your own failure to properly maintain or use such digital wallet or vault, may also result in the loss of your ZKT. Additionally, your failure to follow precisely the procedures set forth in section 4 of Annex B for buying and receiving ZKT, including, for instance, if you provide the wrong address for receiving ZKT, may result in the loss of your ZKT.

11.2 Risks Associated with the Cardano Protocol

Because ZKT and the Platform are based on the Cardano protocol, any malfunction, breakdown, or abandonment of the Cardano protocol may have a material adverse effect on the Platform or ZKT. Moreover, advances in cryptography, or technical advances such as the development of quantum computing, could present risks to ZKT and the Platform, including the utility of ZKT for obtaining Services, by rendering ineffective the cryptographic consensus mechanism that underpins the Cardano protocol.

11.3 Risk of Mining Attacks

As with other decentralized cryptographic tokens based on the Cardano protocol, ZKT are susceptible to attacks by miners in the course of validating ZKT transactions on the Cardano blockchain, including, but not limited, to double-spend attacks, and selfish-mining attacks. Any successful attacks present a risk to the Platform and ZKT, including, but not limited to, accurate execution and recording of transactions involving ZKT.

11.4 Risk of Hacking and Security Weaknesses

Hackers or other malicious groups or organizations may attempt to interfere with the Platform or ZKT 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 Platform is (in part) based on open-source software, there is a risk that a third party or a member of the Profila team may intentionally or unintentionally introduce weaknesses into the core infrastructure of the Platform, which could negatively affect the Platform and ZKT, including ZKT's utility for obtaining Profila Services.

11.5 Risks Associated with Markets for ZKT

ZKT are intended to be used primary on the Platform. This restricts the contemplated avenues for using ZKT to obtain Profila Services or access the Platform and could therefore create illiquidity risk with respect to ZKT you hold. Even if secondary trading of ZKT is facilitated by third party exchanges or decentralized exchanges (DEX), such exchanges may be relatively new and subject to little or no regulatory oversight, making them more susceptible to market-related risks. Furthermore, to the extent that third parties do ascribe an external exchange value to ZKT (e.g., as denominated in a digital or fiat currency), such value may be extremely volatile and diminish to zero.

11.6 Risk of Uninsured Losses

Unlike bank accounts or accounts at some other financial institutions, ZKT are uninsured unless you specifically obtain private insurance to insure them. Thus, in the event of loss or loss of utility value, there is no public insurer or private insurance arranged by us, to offer recourse to you.

11.7 Risks Associated with Uncertain Regulations and Enforcement Actions

The regulatory status of ZKT and distributed ledger technology is unclear or unsettled in many jurisdictions. It is difficult to predict how or whether regulatory agencies may apply existing regulation with respect to such technology and its applications. It is likewise difficult to predict how or whether legislatures or regulatory agencies may implement changes to law and regulation affecting distributed ledger technology and its applications, including the Platform and ZKT. Regulatory actions could negatively impact the Platform

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and ZKT in various ways, including, for purposes of illustration only, through a determination that ZKT are a regulated financial instrument that require registration or licensing. Profila may cease operations in a jurisdiction in the event that regulatory actions, or changes to law or regulation, make it illegal to operate in such jurisdiction, or commercially undesirable to obtain the necessary regulatory approval(s) to operate in such jurisdiction.

11.8   Risks Arising from Taxation

The tax characterization of ZKT is uncertain. You must seek your own tax advice in connection with purchasing ZKT, which may result in adverse tax consequences to you, including withholding taxes, income taxes and tax reporting requirements.

11.9   Risk of Alternative Platforms

It is possible that alternative platforms could be established that utilize the same open-source code and protocol underlying the Platform and attempt to facilitate services that are materially similar to the Services. The Platform may compete with these alternative platforms, which could negatively impact the Platform and ZKT, including ZKT's utility for obtaining Services.

11.10   Risk of Insufficient Interest in the Platform or Distributed Applications

It is possible that the Platform will not be used by a large number of individuals, companies, and other entities or that there will be limited public interest in the creation and development of distributed platforms (such as the Platform) more generally. Such a lack of use or interest could negatively impact the development of the Platform and the potential utility of ZKT, including its utility for obtaining Profila Services.

11.11   Risks Associated with the Development and Maintenance of the Platform

The Platform is still under development and may undergo significant changes over time. Although we intend for ZKT and the Platform to follow the specifications set forth in Annex A of the Token Sale Terms, and will take commercially reasonable steps toward those ends, we may have to make changes to the specifications of ZKT or the Platform for any number of legitimate reasons. This could create the risk that ZKT or the Platform, as further developed and maintained, may not meet your expectations at the time of purchasing ZKT.

Furthermore, despite our good faith efforts to develop and maintain the Platform, it is still possible that the Platform will experience malfunctions or otherwise fail to be adequately developed or maintained, which may negatively impact the Platform and the potential utility of ZKT, including its utility for obtaining Profila Services.

11.12   Risk of an Unfavorable Fluctuation of ADA and Other Currency Value

The Company team intends to use the proceeds from selling ZKT to fund the maintenance and development of the Platform. The proceeds of the sale of ZKT will be denominated in ADA, ETH or BTC, and may, at our discretion, be converted into other cryptographic and fiat currencies. If the value of ADA, ETH or BTC or other currencies fluctuates unfavorably during or after the Sale Period, the Profila team may not be able to fund development or may not be able to develop or maintain the Platform in the manner that it intended.

11.13   Risk of Dissolution of the Company

It is possible that, due to any number of reasons, including, but not limited to, an unfavorable fluctuation in the value of ADA (or other cryptographic and fiat currencies), decrease in ZKT's utility (including its utility for obtaining Services), the failure of commercial relationships, or intellectual property ownership challenges, the Platform may no longer be viable to operate, and Profila may dissolve.

11.14   Risks Arising from Lack of Governance Rights

Because ZKT confer no governance rights of any kind with respect to the Platform or Profila, all decisions involving the Platform or Profila will be made by Profila at its sole discretion, including, but not limited to, decisions to discontinue the Platform, to sell more ZKT for use in the Platform, or to sell or liquidate Profila. These decisions could adversely affect the Platform and the utility of ZKT that you hold, including ZKT's utility for obtaining Profila Services.

11.15 Risks Associated with Advertising-Supported Business Models

Profila's growth and adoption of the Platform may depend on our ability to maintain and expand our existing relationships with Brands and our ability to develop new relationships with other Brands within the Platform. As the advertising market generates and develops new concepts and technology, we may incur additional costs to implement a more effective Platform and may have to adjust to new technologies that could diminish the effectiveness of our business model.

Continuing to develop and improve the Platform to keep up with these changes may require significant time and additional investment. If we cannot continue to develop and improve the Platform to maintain competitiveness in light of such changes, the Platform may not remain viable, which could negatively impact the utility of ZKT, including ZKT's utility for obtaining Profila Services.

11.16 Risks Associated with New and Evolving Laws Impacting Advertising and Advertising Technology

The advertising and advertising technology ecosystems, and by extension our own Platform, are subject to a variety of federal, state, and international laws and regulations, including those with respect to consumer privacy, data protection, consumer protection, content regulation, network neutrality, cyber security, data protection, intellectual property (including copyright, patent, trademark, and trade secret laws), defamation, child protection, and others. These laws and regulations, and the interpretation or application of these laws and regulations, could change.

In addition, new laws or regulations affecting Profila could be enacted. As the Platform evolves, Profila may be subject to new laws and the application of existing laws to us might change. These laws and regulations are frequently costly to comply with and may divert a significant portion of Profila's attention and resources. If we fail to comply with these applicable laws or regulations, we could receive negative publicity and be subject to significant liabilities which could adversely impact Profila, the Platform and ZKT, including ZKT's utility for obtaining Profila Services.

Additionally, the Brands within the Platform are subject to industry specific laws and regulations or licensing requirements. If any of these parties fails to comply with any of these licensing requirements or other applicable laws or regulations, or if such laws and regulations or licensing requirements become more stringent or are otherwise expanded, it could adversely impact the Platform and ZKT, including ZKT's utility for obtaining Profila Services

11.17 Unanticipated Risks

Cryptographic tokens such as ZKT are a new and untested technology. In addition to the risks included in this Whitepaper, there are other risks associated with your purchase, holding and use of ZKT, including those that the Company cannot anticipate. Such risks may further materialize as unanticipated variations or combinations of the risks discussed in this Whitepaper.

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ANNEX I - MEETING NOTES OF THE BOARD OF DIRECTORS

[include signed meeting notes of the board to include as proof that both companies allowed for the ICO to take place]

ANNEX II – SHORT DESCRIPTION OF DATA SUBJECT RIGHTS UNDER GDPR

Short description of data subject rights under GDPR (with references to CCPA)[43]	
Right to Information	Data subjects have the right to be provided with information on the identity of the controller, the reasons for processing their personal data and other relevant information necessary to ensure the fair and transparent processing of personal data. Rec.58, 60; *Art.13-14 GDPR* *Also see Sections 1798.100(b), 1798.130(a), 1798.135 CCPA[44]*
Right to Access	Data subjects have the right to obtain the following: • confirmation of whether, and where, the controller is processing their personal data; • information about the purposes of the processing; • information about the categories of data being processed; • information about the categories of recipients with whom the data may be shared; • information about the period for which the data will be stored (or the criteria used to determine that period); • information about the existence of the rights to erasure, to rectification, to restriction of processing and to object to processing; • information about the existence of the right to complain to the DPA; • where the data were not collected from the data subject, information as to the source of the data; and • information about the existence of, and an explanation of the logic involved in, any automated processing that has a significant effect on data subjects. Additionally, data subjects may request a copy of the personal data being processed. *Rec.63; Art.15 GDPR.* *Sections 1798.100, 1798.110, 1798.130, 1798.145 (g)(3) CCPA*
Right to Rectification	Data subjects are entitled to require a controller to rectify any errors in their personal data. Controllers must ensure that inaccurate or incomplete data are erased or rectified. Data subjects have the right to rectification of inaccurate personal data. *Rec.39, 59, 65, 73; Art.5(1)(d), 16 GDPR.*

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[43] The information in this section is publicly accessible on the website of White & Case in the article "Chapter 9: Rights of data subjects – Unlocking the EU General Data Protection Regulation", accessible via the URL https://www.whitecase.com/publications/article/chapter-9-rights-data-subjects-unlocking-eu-general-data-protection-regulation.

[44] Although there are similarities between GDPR and CCPA, there are also substantial differences. Not all GDPR-based data subject rights exist under the CCPA, and those that do can be different in scope or meaning. Please consult the legal text of the CCPA, available via https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1121.

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Right to erasure (the "right to be forgotten")	Data subjects are entitled to require a controller to delete their personal data if the continued processing of those data is not justified. Data subjects have the right to erasure of personal data (the "right to be forgotten") if: · the data are no longer needed for their original purpose (and no new lawful purpose exists); · the lawful basis for the processing is the data subject's consent, the data subject withdraws that consent, and no other lawful ground exists; · the data subject exercises the right to object, and the controller has no overriding grounds for continuing the processing; · the data have been processed unlawfully; or · erasure is necessary for compliance with EU law or the national law of the relevant Member State. *Rec.65-66, 68; Art.17 GDPR.* *Also see 1798.105, 1798.130(a), 1798.145 (g)(3) CCPA.*
The right to restrict processing	In some circumstances, data subjects may not be entitled to require the controller to erase their personal data but may be entitled to limit the purposes for which the controller can process those data (e.g., the exercise or defense of legal claims; protecting the rights of another person or entity; purposes that serve a substantial public interest; or such other purposes as the data subject may consent to). *Rec.67; Art.18 GDPR.*
Right of data portability	Data subjects have the right to transfer their personal data between controllers (e.g., to move account details from one online platform to another). Data subjects have a right to: · receive a copy of their personal data in a structured, commonly used, machine readable format that supports re-use; · transfer their personal data from one controller to another; · store their personal data for further personal use on a private device; and · have their personal data transmitted directly between controllers without hindrance. *Recital 68, Articles 12, 20 GDPR.* *Also see Sections 1798.100, 1798.110, 1798.130, 1798.145 (g)(3).*
Right to object to processing	Data subjects have the right to object, on grounds relating to their particular situation, to the processing of personal data, where the basis for that processing is either: · public interest; or · legitimate interests of the controller. Data subjects have the right to object to the processing of personal data for the purpose of direct marketing, including profiling. *Rec. 70, Art 12., 21 GDPR.* *Also see Sections 1798.120, 1798.135 CCPA.*
Right not to be subject to automated decision making	Data subjects have the right not to be subject to a decision based solely on automated processing which significantly affect them (including profiling). Such processing is permitted where: · it is necessary for entering into or performing a contract with the data subject provided that appropriate safeguards are in place; · it is authorized by law; or · the data subject has explicitly consented, and appropriate safeguards are in place. *Rec. 39, 71-73, Art. 5, 22 GDPR.* *Also see Section 1798.125 CCPA.*

ANNEX III – DRAFT DSR EMAIL

Data Subject Right Request Document

Email template

[when a user exercises a data subject right with "brand X", this email template will be sent to "brand X" by Profila. All yellow fields should be information that is taken from dynamics and included in the template. Please make sure this email leaves from a "noreply.privacy@profila.com"]

Email title: Data Subject Right request - [include name of the SPECIFIC RIGHT] by [include name of Profila user]

Email content:

Dear [name Brand],

This email constitutes a data subject right request as submitted by [include name of Profila user] on [include the day the request was received].

Via this email, [include name of Profila user] – who is reading along in CC – exercises his/her data subject rights towards [name Brand].

Please find hereunder the specific information about the request:

First and Last Name	[include full first and last name]
Contact Details	[include email or other contact details provided during process in app]
Data Subject Right:	[include specific right]
Additional context (if any)	[include info provided in step 3 by user]
Nationality	[include info from consumer registration]
Country of Residence	[include info from consumer registration]

Please contact [include name of Profila user] directly via the email address shown above when you respond to this request.

Thank you in advance for confirming directly to [include name of Profila user] that your organization has received this data subject right request and will undertake the necessary action.

[include name of Profila user] is looking forward to hearing from you.

You can consult the data subject rights information folder annexed to this email, which contains information about the concept of data subjects' rights. Please also read the legal disclaimer, which applies to this email and the data subject request that Profila has forwarded to your organization.

Best,

The Profila privacy team,
Acting as an authorized agent of [include name of Profila user]

Attachment: Data Subject Right request information folder & legal disclaimer

ANNEX IV – DEFINITIONS

This annex includes a list of definitions, terms and Profila-specific concepts that are used throughout the document.
"Applicable Privacy Law" means the legislative framework that applies to a Brand's processing of Personal Data in the course of its activities, which may depend on a Brand's own country of establishment, a consumer's country or residence or nationality, or other factors; including but not limited to (i) the GDPR, (ii) the CCPA, (iii) LGDP or (iv) any other national, regional or international law in relation to privacy and Personal Data processing.

"App" means the Profila mobile application available for iOS and Android that allows Consumers to perform numerous actions, including, but not limited to:

(i)   adding Personal Data to their account.
(ii)   completing Category Quizzes
(iii) creating Moments.
(iv)   interacting with Brands via Subscriptions and Brand Moments.
(v)   education on Data Rights; and
(vi)   exercising Data Rights.

"Brand" means an individual, corporation, partnership, joint venture, limited liability company, governmental authority, unincorporated organization, trust, association, or other entity, that offers or promotes products and/or services, or – in the case of individual that can be qualified as a "Brand" (e.g. influencers, celebrities, politicians) – promotes him or herself, in a physical or digital environment at any worldwide location, specifically for the Ad-tech industry, this also includes publishers, advertisers, demand- & supply side platform and any other stakeholder that collects personal data in the process;

"Brand Dashboard" means the Profila web-based application that enables a Brand to access Profila's functionalities designed for brands, from a computer or mobile device that can access the internet, accessible here, which allows a brand to perform numerous actions, including, but not limited to:

(i)   viewing lists and statistics of its customers and people that connected to it.
(ii)   inviting customers or followers to connect on Profila.
(iii) creating Subscription Offers.
(iv)   viewing Consumer Moments and interacting with Consumers; and
(v)   creating Brand Moments.

"Brand Subscriber" means a Brand that has entered into a Subscription Contract with a Consumer and is receiving and using Consumer Data per the Subscription Contract.

"Brand Moment" means a picture, text message, video, audio, article, or any other form of (marketing) content, (promotional) offers or information about a Brand, its products or services or other (profit or non-profit) activities, as well as Brand's responses to a Consumer Moment, or other form of digital communication between a Brand and a Consumer, that a Brand can share with a Consumer under the terms and conditions of a Subscription Contract. A Consumer can interact with or respond to a Brand Moment in the form of a view, click, or Consumer Moment, a buying signal etc.

"Brand Subscriber" means a Brand with which a Consumer has entered into a Subscription Contract and is receiving and using Data per the Subscription Contract.

"Brand Offerings" means a Brand Moment, any other form of brand-related content or Third-Party Offerings.

"Brand Privacy Terms" are the privacy terms and conditions as defined by a Brand that govern its processing of a Consumer's Data, which may include part or all of their Personal Data, Categories, and/or Moments, in relation to a specific Subscription Offer. These privacy terms are made available to a Consumer as part of a Subscription Offer, and form part of a Subscription Contract once a Consumer has accepted the Subscription Offer.

"Category" or "Categories" means a category within the App in which Consumers can capture their sentiments and preferences either by including Moments or by completing Category Quizzes.

"Category Quiz" means a text or picture-based gamified quiz based on Category topics. Quizzes gauge Consumer interests in a range of topics. Consumers keep their results, but they can be shared with a Brand as part of a Subscription Offer.

"Consumer" means an individual user of the App who purchases, uses, or accesses goods and/or services in a physical or digital environment at any worldwide location or – in his or her relationship to a "Brand" that is an individual (e.g., influencer, celebrity, politician) – an individual who is a follower, supporter, or sympathizer.

"Consumer Moment" means a photo, video, or text-based message that a Consumer captures via the App to give feedback, which a Consumer can share with a Brand Connection and/or include in a Category.

"Consumer Subscriber" means a Consumer who entered into a Subscription Contract with a Brand.

"CCPA" means the California Consumer Protection Act of 2018, a Californian law that grants residents of the State of California increased consumer protection and privacy rights. It allows them to exercise increased control over their Personal Data while imposing additional obligations on organizations that target the data of such residents.

"Data" means any content or information that a Consumer includes in the App. This includes Personal Data and Data that does not constitute Personal Data and excludes Data Insights.

"Data Insights" are aggregated statistics and other information that are created from certain events logged by Profila when Consumers interact with the App and the content associated with these events. Such events are made up of varying data points such as the following depending on the specific event:

(i)   An action. This includes actions like the following.
   a.   Viewing and interacting with a Brand Moment, Brand Offering or Third-Party Offering.
   b.   Exercising Data Rights towards a Brand Connection or Brand Subscriber.
   c.   Adding Brand Connections.
   d.   Exercising Consumer Moments.
   e.   Filling out Quizzes.

(ii)   Information about the action, the person taking the action, and the browser/app used for it such as the following;
   a.   Date and time of action
   b.   Country/city (estimated from IP address or imported from user profile for logged-in users)
   c.   Age/gender group
   d.   Whether the action was taken from a computer or mobile device (from browser's user agent or app attributes)
   e.   Profila user ID

"Data Subject" means an identified or identifiable natural person whose Personal Data is processed.

"Data Subscription" means the process that allows for individual Consumers to enter into a contract with an unlimited number of brands which governs the brand's access to an individual's "Profila" of personal data under the terms set out in that contract (data license with a specific duration, a purpose for the use of such data, and a compensation for the individual).;

"Data Subject Rights" or "Data Rights" means any rights that an individual may exercise regarding its Personal Data. This includes, but is not limited to, the right to be informed about how an individual's data is being used, the right to access data, the right to rectify data, the right to object to the processing of data, the right to restrict the processing of data, and the right to deletion (right to be forgotten). The definition and protection of Data Rights or Data Subject Rights differ between jurisdictions, and not all jurisdictions have these rights entrenched in law. These Rights include all rights in relation to Personal Data as set out in Applicable Privacy Laws. More information on how these Data Rights can be exercised by Consumers can be found in Profila's Privacy Policy and the App.

"Device" means any iOS or Android mobile device or tablet through which a Consumer can access the App.

"Executive Whitepaper" means the executive summary of the Whitepaper, available here.

"GDPR" means the General Data Protection Regulation (EU 2016/679), a European Union legal framework that applies to the processing of Personal Data of EU nationals and residents. It imposes obligations onto organizations located anywhere around the world that process the data of EU nationals or residents.

"LGDP" means the Lei Geral de Proteção de Dados or Brazilian General Personal Data Protection Law, which was further amended by Law No. 13.853 of 8 July 2019, and which entered into force in August 2020;
"Payment" means a cash amount paid by a Brand to Profila for (i) a consumer's interaction with a Brand Moment or other Brand Offering, or (ii) the Personal Data License granted by a Consumer Subscriber to the Brand under a

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Subscription Contract. A Payment is broken into two (2) equal parts: 50% as the Profila Share and 50% as the Consumer Share.

"Personal Data" is any information that relates to a Consumer as an identified or identifiable living individual. Different pieces of information, which collected together can lead to the identification of a Consumer as a person, also constitute Personal Data. Personal Data includes, for example, an individual's name and surname, home address, email address, identification card number and location data.

"POPIA" means the Protection of Personal Information Act in South-Africa, here.

"Subscription Contract" means the legally binding agreement that a Consumer makes with a Brand after accepting a Subscription Offer, which is made up of three (3) parts: (1) the Subscription Offer; (2) the Brand Privacy Terms; and (3) the Subscription Terms.

"Subscription Terms" are the general terms and conditions that apply to a Consumer and a Brand when the Consumer accept a Subscription Offer from that Brand. They form part of a Subscription Contract together with specific conditions in the Subscription Offer and can be consulted here.

"Subscription Offer" means a request from a Brand to subscribe to a certain set of a Consumer's Data, which may include part or all of a Consumer's Personal Data, Categories, and/or Consumer Moments, and in exchange for compensation or benefit which may be financial. Currently, the Subscription period can last a minimum of one day and a maximum of one year.

"Sensitive Personal Data" means a category of Personal Data that is deemed sensitive by its nature and is therefore granted more protection under the privacy laws of various jurisdictions. Sensitive Data may include racial or ethnic origin, political opinions, religious or philosophical beliefs, biometric data (e.g., fingerprints), or health data;

"Whitepaper" means the full version of the Profila whitepaper for the sale of ZKT, available here.

"Zero Party Data" means data that a customer intentionally and proactively shares with a company.

"ZKA" means Zero Knowledge Advertising.

"ZKT" means Zero Knowledge Token.

CONTACT INFO

Company Information:

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info@profila.com

Website, Social Media, Community Channels:

🌐   https://.profila.com

🌐   **ICO-specific** https://ico.profila.com

in   https://www.linkedin.com/company/profilaprivacy/

🐦   @profilaprivacy

✈   https://t.me/joinchat/wRevEh4Q0Wo5NGQ0

M   https://medium.com/@Profila.com

▶   https://www.youtube.com/channel/UC_H9u6YgO0LVADR1ITcWtjw

💬   https://discord.gg/6RfAyMfG