COGENCY

A project by David Tomchak

Web3 and Media Pilot

This project creates a framework to give users ownership of their data and develop a new, more prosperous relationship between the creators and consumers of content online by developing a decentralised digital identity coalition. The paper introduces concepts such as the users' 'Cogency Engagement Graph' and a Fellowship Model that will bring completely new value and revenue to the media.

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1. Executive Summary

Present day publishing both gains and suffers from the centralisation of user data. This project looks at how the outcomes from data storage can be improved through some of the efficiencies created by decentralised cryptographic technologies, with a focus on decentralised digital identities for users consuming content online.

The project has been run as a coalition which includes publishers, technologists, academics, audience specialists, diversity and inclusion experts and Web3 pioneers (see 9. Appendix for the full list). Our aim has been to find solutions to some of the problems posed below with practical solutions that could be actioned across the publishing industry in 2023.

More specifically, the problems we will be solving are:

1. The current relationship between content creators and consumers suffers from an imbalanced data value exchange, where only creators have access to engagement data and as a result, consumers cannot fully benefit from their engagement.
2. The data gathered on consumers' engagement with content is mainly done in silos, from one content creator or content creator group to the next.
3. Because of this siloing, user acquisition and retention strategies are less efficient and more costly.
4. User-data plays crucial commercial and operational roles for publishers. However, regulations and legislations are being put in place in many jurisdictions which will greatly limit professional content makers' ability to gather and store user data.
5. Legacy, small and large, professional content creators have seen a gradual deterioration in the value of what they publish due to the changing economics of the advertising industry. As a result new funding models are needed to ensure there is a diverse, vibrant and professional content creator ecosystem.
6. The current relationship between content creators and consumers suffers from a lack of trust (in content creators) in part due to practices such as creating click bait to drive engagement.
7. There is little continuity in metadata for Web3 publishing environments which means it can be difficult for solutions to operate at scale.

As the project has progressed, we investigated how the concept of creating a decentralised digital identity for users, that gives users agency over their online presence, will generate benefits for both content creators and consumers.

The cryptographic solution we arrived at has a staged roadmap that starts by creating a simple decentralised identity for users who are rewarded by engaging in content, creating two pillars of actionable data for each user:

1. The Cogency Engagement Graph: verified information (metadata) about how engaged they are with content across different publishers,
2. The Fellowship Model: the more engaged a content consumer is the more they and the associated publishers will be rewarded.

Having completed our initial research, we will now build a completely new ecosystem, including a new wallet hosting a decentralised digital identity sitting on our own proprietary parachain, with associated new tokens (called COG tokens), that are secured on the Polkadot Layer 0 Relay Chain, run by users and autonomous in nature. Each of the items above are expected to add value as described below:

Item	Value Added
Digital Identity	Universal login across all publications that will hopefully help alleviate the problems that future regulation will create for publishers storing data. Giving content consumers full control of their data permissions. Giving users the ability to log in easier across different platforms.
Cogency Engagement Graph	Giving content creators a much wider understanding of how users engage with content across platforms over time to improve the efficiency of content targeting, user acquisition and retention. Providing continuity in how engagement is measured, improving the user retention and acquisition process for content makers. The targeting of the content that consumers receive will be maximised through personalisation.
Fellowship Model	Consumers will be able to bargain with content creators by allowing them access to their data in return for goods or services, such as gifted content. The higher the consumer in the Fellowship ranking, the more bargain power with content creators. Consumers can also opt out of data sharing.
COG token	Be the vehicle to foster user engagement through read-to-earn and the Fellowship Model. This will help increase the project reach and encourage new user adoption by involving the community managing the governance.

The project is expected to launch in Q2-2023 with the conservative financial indicators below (see 7.4 Financial approach section for further details):

- Set up cost for year 1 (2023): $775k, $625k of which are allocated to the team and infrastructure and $150k to the parachain lease.

- Positive Net Income of $2m-$6m is expected from year 2 (2024), rising sales circa 30-50pc year-on-year through 2026 from fiat transactions obtained from fees and when setting up new identities.

- For our new token, the COG token, two sales stages are scheduled (see 5. Token Strategy for further details):
    - A private sale of 200.000.000 tokens at $0,01 through crowdloans, private and VC investments, and Web3 grants aiming to raise $2.000.000 to cover the project set up during 2023 and one year run.
    - A public TGE[1] sale of 150.000.000 tokens at $0,015 aiming to raise $2.250.000 once the project starts operations.

In order to achieve the above, the project will build the solution end to end, building both the wallet and parachain. We will integrate the Cogency Engagement Graph and the Fellowship Model to build the consumer's Digital Identity. And finally we will also build the content management system's front end logic to integrate the technology into the current subscription and membership models run by publishers.

[1] TGE stands for Token Generation Event,a business and technical act of limited duration that involves the technical generation of the token in a blockchain-based network, and its launch to the market.

2. Introduction

2.1. Background

Since the advent of the internet, users have been commodified by centralised online platforms by giving away their data in return for quick, relevant and convenient online services. The design of the internet to-date has been driven by this value exchange. There have been many benefits to this relationship between value and access.

However, in the context of content production, we believe that although there is merit in this relationship, it could be vastly improved. If so, one might ask, ‘how’? Or even, ‘why’? For that we need to give some background.

From a content creation, or ‘publisher’ perspective, the early internet, or Web 1.0, was an exciting new way to reach a much wider set of content consumers, or audiences. The internet slashed the price of distribution and within a few years it cost next to nothing to publish content to a global audience. At this time, the internet had the attributes of what might be called a read-only environment for most users. The majority of the content online came from legacy publishing brands. Consumers were happy to log on to read what was published. Notably, the advertising business model which had underwritten the publishing industry throughout the 20th century remained at the heart of the publishing industry’s digital commercial strategies. In fact, the gathering of user data made targeting ads even more efficient.

In the early 2000s, wireless application protocols, faster connectivity, the development of new hardware like smartphones and the rise of platforms (in particular search and social) saw a new version of the internet that had the attributes of a read-write ecosystem. Thanks to this new technology it was much easier to not only consume but also to create and distribute content online. Looking back, it felt like almost overnight everyone became both a publisher and a member of the audience. Web 2.0 was born.

One of the trade-offs for the success of Web 2.0 was that in order to participate in the read-write world, consumers of content had to hand over their data. If you joined a new platform and wanted to post or view the pictures from your friend’s birthday (Facebook) or sell or buy your cousin’s bike (eBay), you had to hand over some of your personal data for the service.

Users were hungry to participate in this new read-write world and the new platforms hosting content quickly began to build huge data warehouses full of users’ profile data. As had been done in Web 1.0, this data could then be commoditised by the platforms through advertising, e-commerce and eventually a whole host of commercial strategies too numerous to list here.

When it came to content, these shifts impacted two user groups more significantly than any other.

First, the audience. Although there were benefits in giving away their data, they also lost agency over their online identity. Perhaps more importantly, in part due to data-led targeting, over time users started to receive a service that was in decline and was considered less trustworthy. Suffice it to say for the purposes of this paper, the centralised nature of how data is captured and shared is worthy of scrutiny.

The second user group impacted by the technology driven shifts was journalists and publishers. This user group saw the commercial rug pulled from under their feet as first, classified ads and then, a whole host of revenue lines started to leave their balance sheets and migrate to new platforms.

In order to combat this decline in income, all publishers (that survived) adopted aspects of the digital commercial models associated with web 2.0 and even partnered with the new platforms. One result was that the commercial decline of publishers was slowed. Nonetheless, the publishing industry remains on life support and in critical condition. Publishing clickbait is still rewarded and quality continues to erode. Meanwhile prospective bright, new entrants into publishing turn away to join other industries due to a lack of financial incentive. A few new entrants to the market make it, but very few. And what is left of the publishing industry is increasingly owned by a smaller and smaller group of wealthy individuals or corporate and state actors.

‘So what?’ you might ask. Well, there has yet to be a healthy, wealthy democracy anywhere on the planet without a diverse, vibrant and lively set of journalists and content makers holding power to account and celebrating culture. So we posit that it is in our best interests to make sure that being a content maker or journalist can pay the bills, no matter what the person’s background or status in society.

At this point it is worth noting that many, many important books, articles and blogs have been written on the wider societal impact of this era of the internet from the perspective of both ‘benefit’ and ‘harm’. But that is not the focus of this project. Our focus is on solving the problems outlined in the Executive Summary above.

2.2. Methodology

The Cogency project’s coalition, which was founded by David Tomchak, came together to assess whether cryptography, blockchains and associated Web 3.0 technology could provide an opportunity for these users (audiences and publishers) to begin to develop a new relationship online.

During this assessment, the project also aimed to research whether this technology could really provide the foundations of a new ‘read-write-own’ Web3 environment online, as many of its proponents attest, moving the internet on from the ‘read-write’ world of Web2.

In particular, the project members wanted to evaluate whether the technology can create a more equitable, trustworthy and commercially sustainable value exchange between the audience and the publisher.

But before we could start this work in earnest, we had to first build a functioning coalition from a variety of groups that represented a range of understanding, from expert to novice, in certain areas.

2.3. Project structure

The project was designed to provide a space to learn and share knowledge between media and Web3 industries. We aimed to research problems that we wanted to solve and then apply our learning around Web3 technology to try to find solutions. We decided to have no initial boundaries other than to seek practical, actionable solutions; the coalition even agreed that a valid outcome would be to determine that we could not find a suitable set of problems to solve using this technology.

However, as illustrated later in this paper, we found that data, subscription/membership and identity were all interesting problems to research as use-cases for this technology.

The main structure of the work that led us to our conclusions was initially outlined as follows:

Web3 and Media Pilot
A collaborative project bringing together local and international news, current affairs and lifestyle publishers and technologists, to assess how Web3 can be used to help build ongoing trust and develop new sources of revenue for publishers and content producers.

The project was split into two main milestones[2]:

- Milestone 1: Create and distribute 'Web3 Bursary'
    - Working with the World Association of News Publishers, 'WAN-IFRA', Cogency set up a bursary for WAN-IFRA's members to underwrite some of the cost associated with joining the project. The winners of the bursary were Les Echo/Le Parisien (a joint submission from France), Mediahuis (Netherlands) and Publico (Portugal).
    - In addition to facilitating the creation and distribution of the bursary, the documentation provided for Milestone 1 demonstrates how to work together on a research project in a decentralised way and can help guide future projects of a similar stakeholder complexity.
    - This milestone also provided a project plan for the pilot design and implementation (Milestone 2, below).
- Milestone 2: Pilot Design and Implementation

[2] Milestones further details:
M1 - https://github.com/CogencyWeb3/Web3MediaPilot/blob/main/Deliverables/Cogency-Milestone_1.md
M2 - https://github.com/CogencyWeb3/Web3MediaPilot/blob/main/Deliverables/Cogency-Milestone_2.md

- Cogency's members worked in weekly sprint cycles.

- The first seven weeks of the project were dedicated initially to learning and building a functioning coalition that had a common understanding of technologies and systems.

- Once a common understanding was achieved, the group debated the merits of different technologies and systems in relation to problems that need to be solved. This was done with a view to selecting an approach to focus on during the second half of the project.

- Experts from industry, academia and the Web3 Foundation were brought in through this seven-week period to help with knowledge and understanding.

- The following topics were covered by the group: Assessment of the governance for a future entity, such as a DAO; case studies of how parachains may be used to establish trust through transparency; discussion on what the strategy could be for use of CDN (content delivery network) for scalability and edge technologies - for example, a decentralised CDN concept; research into integration of CMS (content management systems) with Polkadot and other chains using parachain and research into scalability and rollout strategy across disparate, publishing CMS ecosystem for publishers; investigation into using ink! 3.0 from Parity as primary language for smart contract development; assessing native tokens and incorporation of open-source projects; exploration of reporting and monitoring tools; research of hosting environments including AWS for suitable, performant ecosystems; dApp scoping for content creation, sharing and trust models in decentralised form focusing on privacy and security.

- At the end of the seven-weeks, the team voted on a direction that they would like to take for the remainder of the project. We agreed that we wanted to pursue a solution that focussed on meta-data and subscription/micropayment/membership strategies.

- For the following five weeks the project continued to run weekly sprints but the focus moved to designing a solution to answer the questions we set out to tackle at the beginning of the project.

The output from both milestones and all the sprints is stored in github repository and can be reviewed in the appendix of this paper.

3. Problems to be addressed

As outlined in the Executive Summary, the problems that we've identified within the media industry that this project aims to resolve are:

1. The current relationship between content creators and consumers suffers from an imbalanced data value exchange, where only creators have access to engagement data and as a result, consumers cannot fully benefit from their engagement.
2. The data gathered on consumers' engagement with content is mainly done in silos, from one content creator or content creator group to the next.
3. Because of this siloing, user acquisition and retention strategies are less efficient and more costly.
4. User-data plays crucial commercial and operational roles for publishers. However, regulation and legislation is being put in place in many jurisdictions which will greatly limit professional content makers' ability to gather and store user data.
5. Legacy, small and large, professional content creators have seen a gradual deterioration in the value of what they publish due to the changing economics of the advertising industry. As a result new funding models are needed to ensure there is a diverse, vibrant and professional content creator ecosystem.
6. The current relationship between content creators and consumers suffers from a lack of trust (in content creators) in part due to practices such as creating click bait to drive engagement.
7. There is little continuity in metadata for Web3 publishing environments which means it can be difficult for solutions to operate at scale.

In the following section we will outline how each of the problems will be addressed by detailing the solution the project proposes.

4. Business Model and Solution

4.1. Solution Overview: Concept and Value Proposition

The Cogency team proposes developing a decentralised identity for content consumers that gives them new autonomy over the data that they share with content makers. These users can build what we are calling a **Cogency Engagement Graph** as a part of their decentralised identity that includes verified information (metadata) about how engaged they are with content across different publishers. This verified engagement credential is ranked based on how engaged the users are in a nine-level **Fellowship Model**. The more engaged the user, the higher the ranking.

The content consumer will be able to use their identity to signal their interest in content, provide the permissions they wish to grant to any new content creator they engage with and negotiate for better services and privileges from content creators.

In return for validating these identities and the levels of engagement on their platforms, content creators will have access to a broader understanding of what content consumers want based on a broad cross-section of their engagement across multiple platforms, not just their own, thanks to the Cogency Engagement Graph and Fellowship Model. This information can be used to assist in user acquisition and retention as well as content targeting and even the planning and commissioning process.

Content makers will be able to charge to create any new wallet and identity generating a new revenue line per wallet. They will also be able to better tailor subscriptions and membership programmes to vastly improve user acquisition and retention as well as audiences' day-to-day experience.

A percentage of the fiat raised from generating revenue through the creation of the new wallets and identities will be secured as treasury funds for the new token being used in the project.

Both content maker and consumer will be issued tokens to signal that they are part of a community. The result is a more efficient, better balanced value exchange between content consumer (audience) and content maker (publisher). Any value associated with these tokens will form a portion of the business model. More detail is included in both 5. Token Strategy and 7.4 Financial approach sections below.

The solution will require Decentralised Identifiers (DIDs) and Verified Credentials (VCs), to work together under our own parachain and wallet ecosystem, in order to build both the Cogency Engagement Graph and the Fellowship Model for each user. These, in turn, will communicate with the Content Management Systems (CMS) of the different publishers.

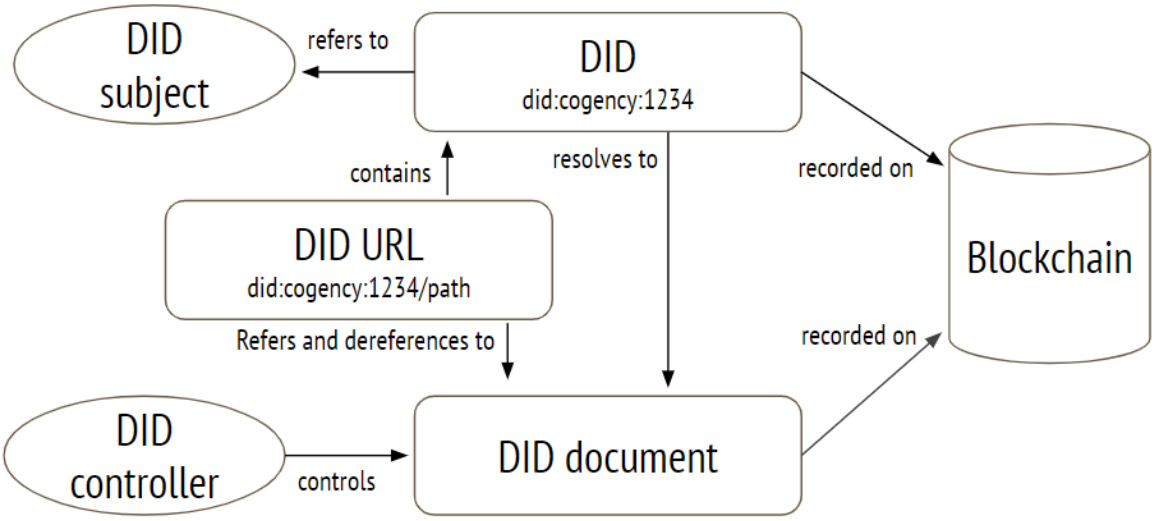
4.2. Solution Detail

4.2.1. Digital Identity: DID Architecture

The decentralised identifier (DID) is a type of unique global identifier, which identifies the consumer, containing a string that includes three elements:

1. URI scheme
2. Method
3. Specific identifier

The DID architecture is as follows:



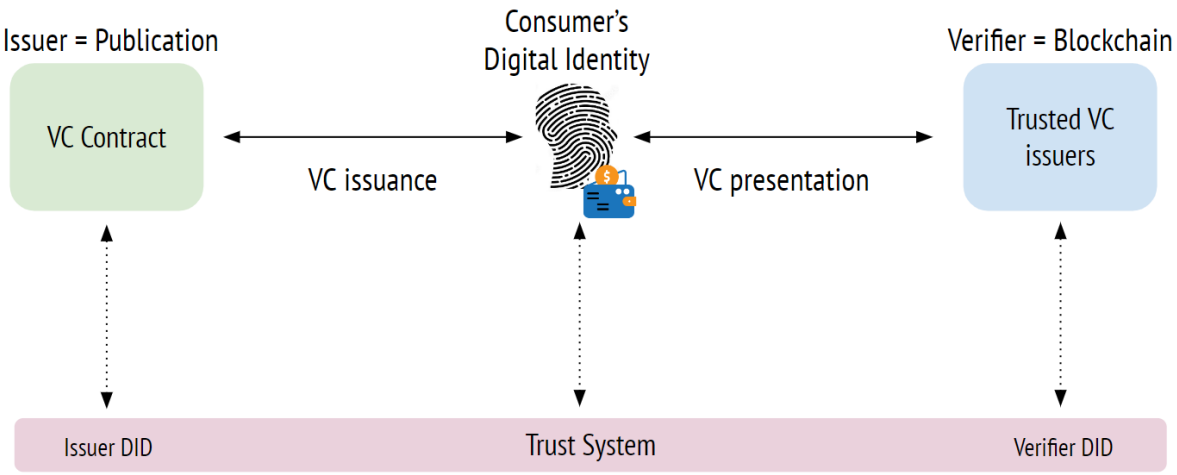
In the architecture above, the DID is made up of *did* as the URI scheme, *cogency* as the method and *1234* as the specific identifier. DID URLs refer to a DID subject, that is, the consumer, and resolve to DID Documents, which contain information associated with the DID, such as cryptographic public keys, services, and interactions. DIDs can be recorded on-chain, such as distributed ledgers or decentralised file systems. Finally, a DID controller, in this case either the consumer or the publisher, will be able to modify the DID document.

The architecture has been designed for control, privacy, security, interoperability, extensibility, and portability. The consumer is at the heart of every interaction owning their own identity, which remains private unless the consumer states otherwise.

4.2.2. Digital Identity: VC Architecture and Workflow

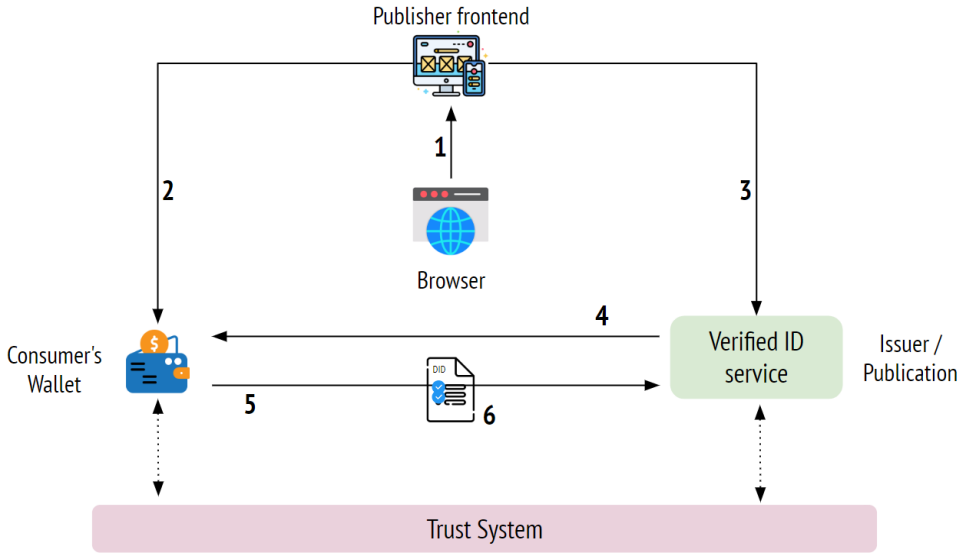
The Verifiable Credential (VC) are digital equivalents to our identity-related documents, and in this project they will save the consumer's related data: DID, Fellowship Model ranking and Cogency Engagement Graph. Using this data allows parties to go through an anonymised, safe and transparent KYC process ("Know-Your-Customer"). In this section we'll deep dive into two processes:

1. VC issuance: how the consumer requests a VC from the publisher
2. VC presentation: how the consumer presents a VC to the blockchain



4.2.2.1. VC issuance

In this process, the consumer interacts with the publication to request a VC:

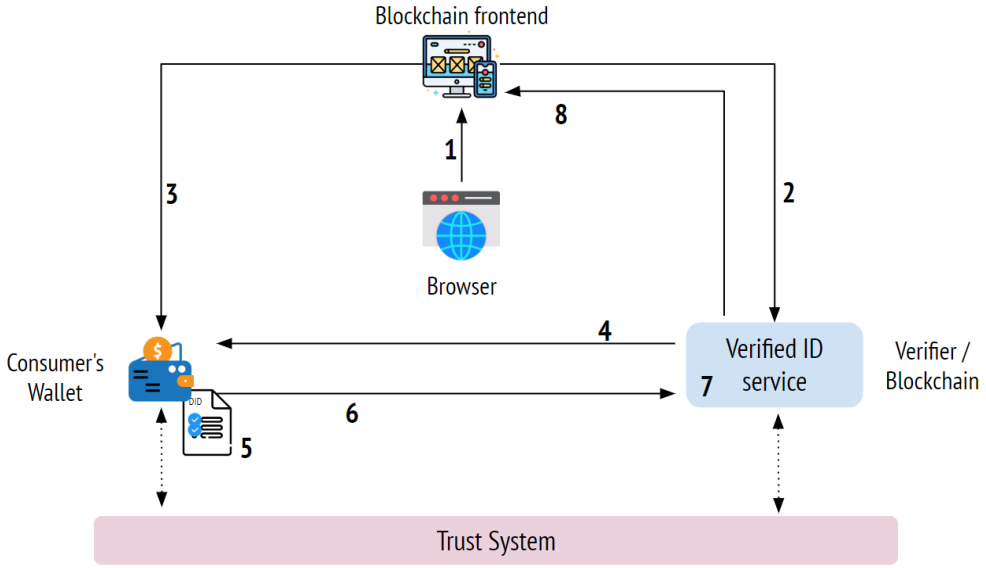


1. The consumer starts the flow by using a browser or native application to access the publisher's web frontend when setting up or upgrading a subscription, membership or similar. There, the publisher website drives the consumer to a form to collect initial data around permissions, interests and T&Cs (self-attested attributes) and executes issuer-specific logic to determine whether the credential can be issued, and its content.
2. The consumer is prompted to set up a Cogency Wallet.
3. The publisher's web frontend calls the Cogency service to generate a VC issuance request.
4. The wallet downloads the request from the link. The request includes:
    a. DID of the publisher. This is used by the wallet app to resolve via the trust system to find the public keys and linked domains.
    b. URL with the VC manifest, which specifies the contract requirements to issue the VC. This can include id_token, self-attested attributes that must be provided, or the presentation of another VC.
    c. Look and feel of the VC (URL of the logo file, colours, etc.).
5. The wallet validates the issuance requests and processes the contract requirements:
    a. Validates that the issuance request message is signed by the publisher keys found in the DID document resolved via the trust system. This ensures that the message hasn't been tampered with.
    b. Validates that the DNS domain referenced in the publisher's DID document is owned by the publisher.
    c. Depending on the VC contract requirements, the wallet might require the consumer to collect additional information, for example asking for self-issued attributes, or navigating through an OIDC flow to obtain an id_token[3].
6. Submits the artefacts required by the contract to the Cogency service. The Cogency verified id service returns the VC, signed with the issuer's DID key and the wallet securely stores the VC.

[3] OpenID Connect - https://openid.net/connect/

4.2.2.2. VC presentation

In this process, the consumer interacts with the blockchain to present a VC to get authorization to consume content:



1. The consumer starts the flow by using a browser or native application to access the verifier's web frontend.
2. The web frontend calls the Verifier ID service to generate a VC presentation request.
3. The web frontend renders a link to the request a deep link from the Cogency Wallet
4. The wallet downloads the request from the link. The request includes:
    a. A standard based request for credentials of a schema or credential type.
    b. The DID of the verifier, which the wallet looks up in the trust system.
5. The wallet validates the presentation request and finds stored VC(s) that satisfy the request. Based on the required VCs, the wallet guides the subject to select and consent to use the VCs.
    a. After the subject consents to use of the VC, the wallet generates a unique pairwise DID between the subject and the verifier.
6. Then, the wallet sends a presentation response payload to the Verifier ID service signed by the subject. It contains:
    a. The VC(s) the subject consented to.
    b. The pairwise DID generated as the "subject" of the payload.
    c. The Verifier DID as the "audience" of the payload.
7. The Verified ID service validates the response sent by the wallet.This validation includes checking the status of the presented VC with the consumer to update their Cogency Engagement Graph or for cases such as revocation.
8. Upon validation, the Verified ID calls back the Verifier with the result.

4.2.3. Cogency Fellowship Model

The Cogency Fellowship Model is designed to recognise, nurture, and incentivise content consumers' engagement with content. The ultimate aim of the Fellowship is to encourage users to increase their knowledge through greater engagement with content from a variety of sources. To qualify to join the Cogency Fellowship Model you must have a Cogency decentralised digital identity and a connection (through a subscription or similar) to one of Cogency's publisher coalition.

There are nine levels to the Fellowship Model. A summary of the ranking is below. When a content consumer moves up a rank they are rewarded with 3 (tbc) Cogency tokens (COG) and their change in status is reflected in the branding of their Cogency Wallet.

Engagement is verified every month. If engagement dips over a six month period a Fellow may be demoted a rank and this will be reflected in the branding of their wallet. Any tokens issued will remain with the Fellow. If the Fellow increases their engagement to reverse this demotion no new COG tokens will be released when they reinstate their lost ranking but the wallet branding will be restored. Users can only move up one rank at a time. Users must hold their rank in tokens to move to the next level. For example, to move from Green (rank 6) to Blue (rank 7) the Fellow must hold at least 6 tokens. The exception to the rule is moving from rank 2 to rank 3, where the Fellow needs only to hold 1 token.

The Fellowship ranking is as follows:

Rank	Description
1. Non Engaged	New user with low or no permissions for sharing engagement data with publisher coalition.
2. Engaged	New user with high or open permissions for sharing engagement data with publisher coalition. A user will identify themselves as Non Engaged or Engaged when setting up their digital identity. There are no new tokens released when moving between rank 1 and rank 2.
3. White	The user consumes over 10 items of content per week from one publisher for a one month period. The user will hold the Informed badge attached to their wallet, which will have a white background.

4. Yellow	The user consumes over 10 items of content per week from two publishers for a one month period. The user will hold the Informed badge attached to their wallet, which will have a yellow background.
5. Orange	The user consumes over 10 items of content per week from three or more publishers for a one month period. The user will hold the Informed badge attached to their wallet, which will have an orange background.
6. Green	The user consumes over 10 items of content per week from each of two or more publishers for a two month period (total 20 items of content or more per week). The user will hold the Expert badge attached to their wallet, which will have a green background.
7. Blue	The user consumes over 10 items of content per week from each of three or more publishers for a two month period (total 30 items of content or more per week). The user will hold the Expert badge attached to their wallet, which will have a blue background.
8. Brown	The user consumes over 10 items of content per week from each of three or more publishers for a three month period (total 30 items of content or more per week). The user will hold the Expert badge attached to their wallet, which will have a brown background.
9. Black	The user consumes over 20 items of content per week from each of three or more publishers for a three month period (total 60 items of content or more per week). The user will hold the Super User badge attached to their wallet, which will have a black background.

This scale will be refined as the project progresses. Also, what it means to consume content- dwell time, scroll depth and similar indicators - will be finalised after development of an MVP and user testing. The Fellowship criteria will be defined by the Cogency community once the project is fully fledged (see 4.3 Community and Governance section).

4.2.4. Cogency Engagement Graph

The Cogency Engagement Graph is the graph that is compiled in each user's unique decentralised digital identity to illustrate their levels of engagement with content across different platforms and signal the permissions that the user has applied to the use of their engagement data.

The type of information stored in the graph will range from user information, such as name and age, which will be added when the digital identity is initiated, to continuously updated engagement information analogous to cookie data such as content tag, topic, scroll depth, CTR (click through rate) or dwell time.

The continuously updated engagement information will be collated on a monthly basis to create a graph that represents the user's engagement across platforms. In so doing a much richer and broader, as well as more accurate, picture of user consumption will be compiled than is currently possible.

Users ongoing control over the permissions associated with sharing this data will be managed through their wallet. The Cogency Engagement Graph will be used to assess where a user is in the Cogency Fellowship and this is also viewable in their wallet.

4.2.5. Creating the Digital Identity: Account Creation and Workflow

The process starts in the publisher's CMS, where the publisher engages with a new or existing user around their subscription, a micropayment or a membership payment. Users will be offered the opportunity to pay a publication in return for creating a new decentralised digital identity. (Where the user already has a decentralised digital identity, they will be offered the option of using that identity to set up a new subscription, micropayment, membership or similar with no extra fee.)

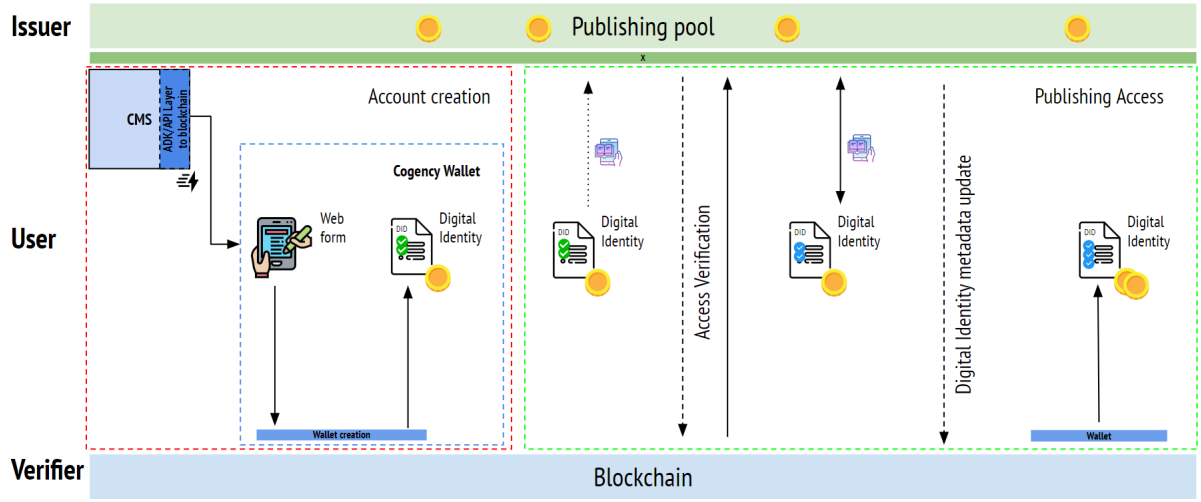
For new users who do not already have a digital identity but wish to set one up, users will be asked to set up a Cogency wallet to host their new digital identity. Once this has been completed, a trigger will be released, which will prompt the creation of the consumer's digital asset in the form of a decentralised digital identity.

This decentralised digital identity contains a Decentralised Identity (DID) embedded in a Verifiable Credential (VC). The digital identity is not tied to a single publisher, it is tied to the

consumer. The VC will be based on metadata gathered in an account initiation form filled out by the consumer, who will be asked to complete additional information (interests, personal details). Via their new wallet, the consumer will then own their own data and the permissions to use it: not the publisher, not the platform, but the consumer themselves. So, this account initiation form will also be used by the user to signal what permissions they would like to share/grant to any publisher they interact with. And it will provide an opportunity for the consumer to consent to terms and conditions associated with data management and storage legislation.

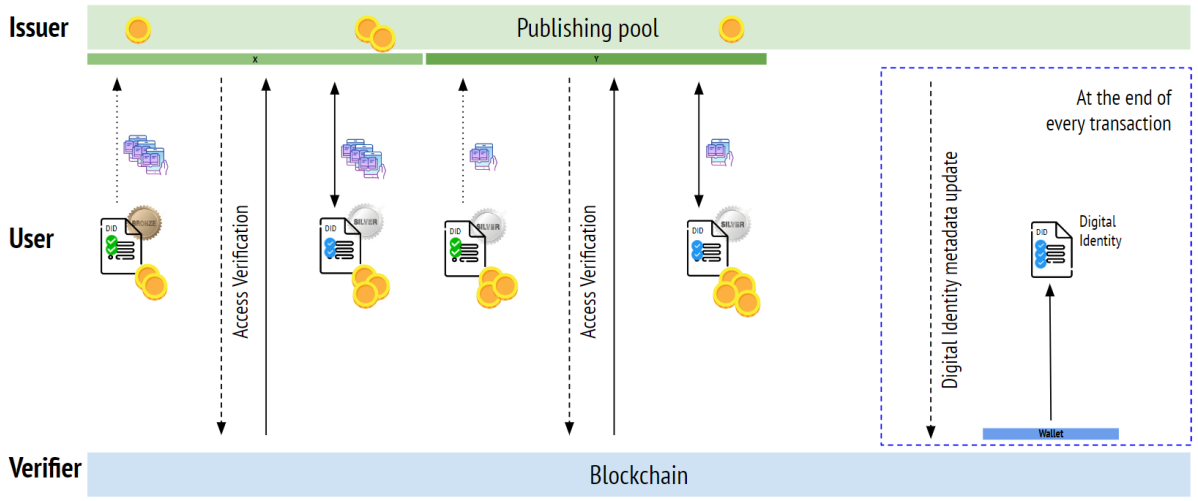
The consumer also gets a unique profile created on-chain that can be seen in their wallet and displays their Fellowship level. This profile can also be shared to socials or similar platforms as a profile for the community.

And, whether the consumer is setting up a new Cogency digital identity with a publisher for the first time or they are connecting their current Cogency digital identity with a new publisher, the consumer gets 3 Cogency tokens for connecting. Each publisher will also be granted 3 tokens for onboarding a new user:



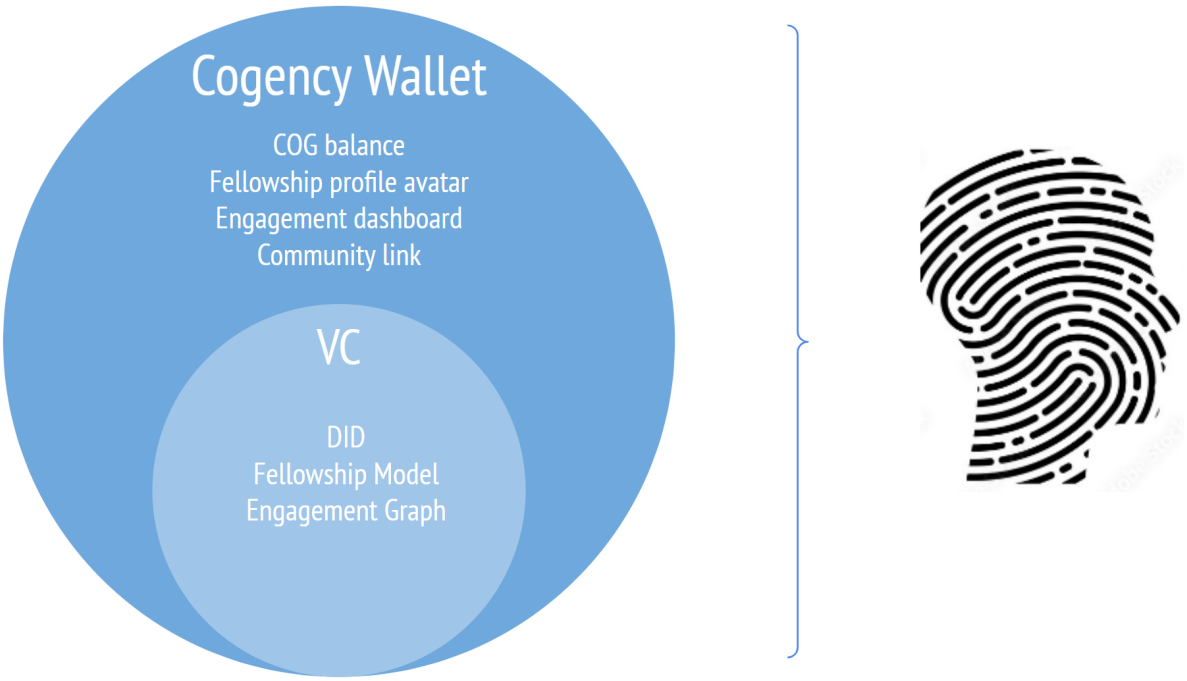
Once the account is created, and the consumer wants to consume a piece of content from a specific publication, the publication (issuer) will double check with the blockchain (verifier) if the consumer has the right to consume that piece of content (and if so, for example the green tick will become a blue tick), and the VC will be updated accordingly with the latest consumer's metadata on their Cogency Engagement Graph. Cogency Engagement Graphs will be updated on a monthly basis to manage the workload associated with updating the VC on chain. The Cogency Engagement Graph will be stored locally by the CMS between monthly updates.

Once a threshold of content consumption is reached, the consumer will begin to move through the Fellowship rankings and again the VC will be updated accordingly and tokens released to publisher and consumer. Separately, the user can access any other publication at any time (e.g. site Y on the example below), and the same verification process will apply:



4.2.6. Cogency Wallet

As discussed in previous sections, in order to interact with the Cogency ecosystem, each consumer will need to have a Cogency wallet. We will build the new Cogency wallet as outlined below:



Each wallet contains all the data attached to the consumer. It holds the VC, which includes the DID and both the Fellowship Model and the Cogency Engagement Graph, together with the COG balance and the rest of the wallet specific functionalities, including but not limited to

the consumer's avatar, the engagement dashboard and the links to the community. All these items make up the consumer's digital identity, which will be available through a web interface, called the Cogency app, so the consumer can also see their stats.

Additional features of the Cogency wallet are as follows:

- Displays profile preference, including areas of interest and data sharing permissions.
- Provides connection to DEX to trade tokens.
- Displays Cogency Engagement Graph and lists publishers that the wallet is attached to.
- Provides a list of other publishers that the user may be interested in connecting with.
- Connects to community Discord Channel.

4.2.7. Web2 CMS Integration

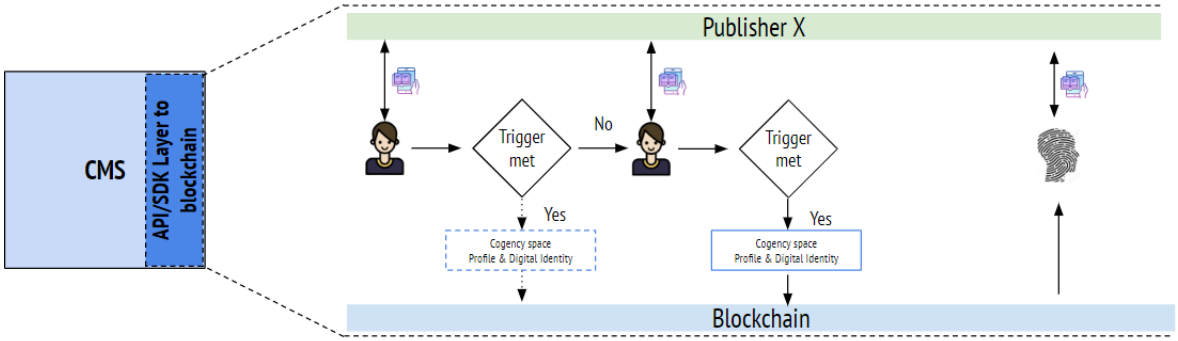
An SDK will be developed to provide an integration between publisher web platforms and the blockchain layer. It will provide consistent technical integration and enable security, performance and feature updates to be rolled out to the ecosystem.

There will be a suite of API interactions built into the SDK to enable the required functionality including retrieving data from the wallet and registering a transaction e.g. article view and sharing an article with a peer. The SDK will be flexible and allow for future transactions including micropayments and article gifting once implemented. It will also allow for the expansion from direct integrations to communicate with existing subscription platforms, such as Piano and Zephr, to create an easy adoption route for publishers with existing contracts with subscription platforms. Finally, Cogency Engagement Graphs will be updated on a monthly basis to manage the workload associated with updating the VC on chain. The Cogency Engagement Graph will be stored locally by the CMS ecosystem between monthly updates.

In addition to login and creation of digital ids, there will be support for B2B, for example digital identity to brand that will enable communication between brands and users including ecommerce and personalised discounts and benefits.

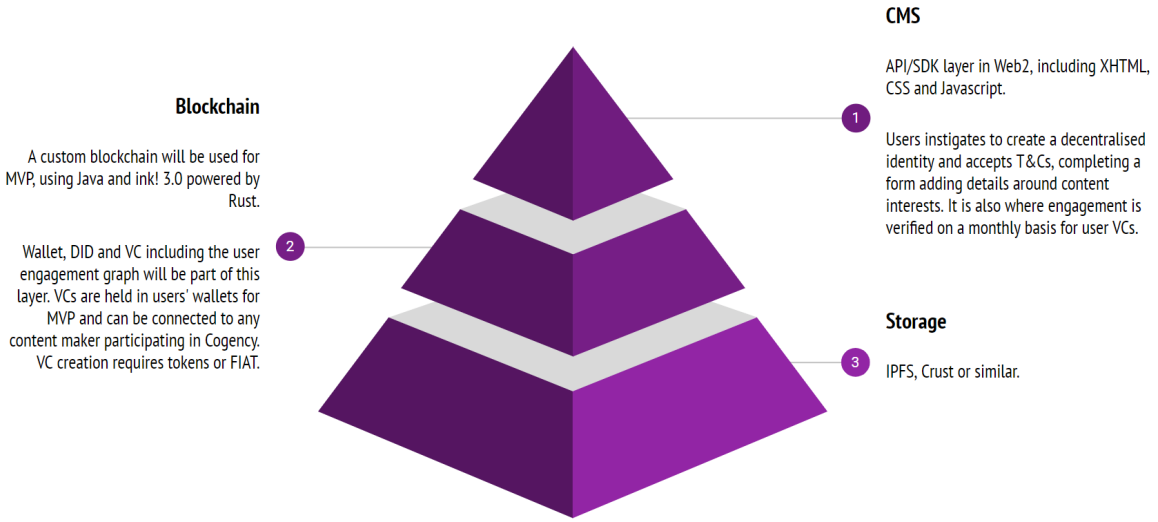
As security is paramount for the platform, various login methods for the wallet will be supported including Single Sign On (SSO) and emerging options including Pass Keys which are secure and are based on biometric login rather than passwords.

The method the SDK will be loaded into the browser, along with cache rules and optional CDN integration, will be optimised for performance to enable it to work on different internet connection speeds and devices. The SDK will be supported by public documentation, status of platform indicators and release logs.



4.2.8. Tech stack

The tech stack is divided into three main layers:



4.3. Community and Governance

Cogency will be designed to enhance privacy on the internet for decades to come. Governance on Cogency enables this, allowing it to run as a decentralized blockchain with the facility to evolve and be self-sustainable.

To manage changes to the Cogency Engagement Graph parameters or to the Fellowship Model, as well as chain upgrades or related CMS updates, Cogency will support a bicameral advisory structure. To reflect the publishers' need for development and the consumers' need for security and continuity of service, we expect a reasonable direction for community governance would be to form two advisory chambers from a 'consumer' committee

(nominated by consumers through a voting cycle) and a ‘publisher’ committee made up of major client developers and publishing ecosystem players.

This will create two communities in one that will be able to participate in the management of the ecosystem to the benefit of all actors.

Any COG holder can then submit a proposal via these chambers, which then goes through a formal, transparent online procedure that usually ends in a referendum that goes to community vote. The community can also vote on existing proposals and referenda. Coins that are locked for staking can also be used to vote. The underlying token holders would have “referendum” control.

Like Polkadot and Kusama, Cogency will likely adopt conviction voting. This means if you feel very strongly about a proposal, you can lock up coins for longer periods to increase your voting power up to a maximum factor. The longer you lock your coins, the stronger your vote will be weighted. The weighing of this conviction voting will be finalised ahead of the creation of the COG token.

Over the first five years after the initial Token Generation Event (TGE), the Cogency Treasury shall be rewarded a third of newly-minted coins in a linear manner. The Treasury will also maintain governance over the fiat transactions associated with onboarding new users of the Cogency Wallet and liaise with publishers on associated Web2 upgrades or strategic changes. This will have attributes of a permissioned environment.

5. Token Strategy

Cogency can run without issuing a token. Issuing a Cogency token (COG) will however help create an additional layer of value. It will help answer some of the key questions posed above by being the vehicle to foster user engagement through read-to-earn and the Fellowship Model.

And there are more benefits. Creating a new blockchain is expensive but can be supported by the Polkadot community if a new token is included in its creation. The community will be able to help underwrite the cost of leasing a parachain if a token is included as a part of the project. This in turn will help increase the project reach and encourage new user adoption. Creating a new token is therefore also a way to manage the governance and build the community outlined above.

As a result of these benefits and others, it feels appropriate to issue a new token in order to build out the project at scale and in an affordable manner while fostering a sense of community. As suggested in the community and governance section above and tokenomics model section below, a full token strategy will be defined during the project roll-out.

5.1. Token's Utility and Workflow

COG can be used in a different way for a variety of actors. The project has three main actors: consumers, publishers, and Cogency as the platform. And it also has four main utilities, depicted below:

- Consumer Utility:
    - Can establish agency and ownership of their data and develop a Cogency Engagement Graph
    - Can control data-sharing permissions across platforms
    - Can consume content from the publisher in a more targeted manner
    - Can benefit from being a premium user by receiving incentives from publishers
    - Can move up in the Fellowship rankings by consuming content
    - Can earn tokens by level up in the Fellowship rankings
    - Can hold tradeable tokens
    - Can buy tokens
    - Can sell tokens
    - Can leverage benefits from content creators by allowing access to their data

- Publisher Utility:
    - Can earn fiat income from the consumer's subscription upgrade
    - Can use the id in their strategy to mitigate against future legislation that will limit the ability to hold user data
    - Can hold tradeable tokens

    - Can earn tokens if their customers level up in the Fellowship rankings and benefit from associated engagement
    - Can validate consumer's engagement and learn more about their customers
    - Can gift content to customers to improve user retention
    - Can connect with new users more efficiently for better user acquisition and early retention (no cold-start for new subscribers, for example)

- Treasury Utility (Cogency):
    - Can earn fiat income from the consumer's subscription upgrade to act as a reserve in support of parachain infrastructure and tokenomics
    - Can liaise with Web2 partners associated with digital identity process
    - Can earn tokens from transaction and service fees
    - Can hold tradeable tokens
    - Can mint tokens
    - Can sell tokens
    - Can burn tokens to decrease the supply

- Staking Utility:
    - Can earn income by the consumer's subscription upgrade
    - Can earn income by the traded tokens
    - Can earn tokens from transaction and service fees
    - Can hold tradeable tokens
    - Can mint tokens
    - Can sell tokens
    - Can burn tokens to decrease the supply

Cogency identity holders have to hold a certain number of tokens to move to the next Fellowship rank which will incentivise people to hold on to tokens for a period and not sell too quickly. This method will extend the token hold time and help to avoid tokens being dumped as soon as they are acquired.

If a user moves from one Fellowship level to the next this also rewards the publisher in COG, in effect minting more tokens for them. This will help create more "ins" than "outs" — meaning that the incentives around engagement increase the inflow of tokens into the system.

5.2. Tokenomics model

COG, the native Cogency token, will be a minted Layer 1 token built on top of the Polkadot's Layer 0 Relay chain, following proof-of-stake for the token creation. The fully diluted supply[4] of the native Cogency token will be 1.000 million COG, with the smallest denomination being 10^{-8} (0,00000001 COG).

COG will use a primary inflationary model (no hard limit on the number of tokens created), with two mechanisms to keep inflation[5] under control: token burning and token unlock. Block rewards and inflationary strategy will be further assessed during the build process.

Inflation mechanism	Infinite Maximum supply	Scarcity
Decreasing rewards	Yes	Yes*
	No	Yes
Burning	Yes	No
	No	Yes
Token unlock	Yes	Yes**
	No	Yes

*long-term scarcity as the token is more difficult to be obtained over time
**depending on the unlocking strategy

There will be two types of fees:

- Service fees. Every transaction made with both Digital Identity and CMS providers will have a 1% service fee that will be allocated to Cogency's wallet.

- Transaction fees. Every transaction involving minting or buying tokens will have a 1% transaction fee: 0,5% will be burned, 0,25% will go to Cogency's wallet and the remaining 0,25% will be allocated to the Cogency's reserves.

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[4] The **circulating supply** is the number of publicly issued tokens in circulation. The **total supply** also includes tokens that have been created and then burned, making the remaining tokens in circulation more scarce. Finally, the **maximum supply** is the maximum number of tokens that can be ever generated.

Market capitalization = Market Price * Circulating Supply
Fully diluted Market capitalization = Market Price * Total Supply

[5] There are three main ways of keeping under control the inflation of a token. **Decreasing tokens rewards** after a certain amount of verified blocks is achieved. (i.e. halving bitcoins over time as a reward for block verification). **Burning tokens**: the more the token is used, the more tokens are removed from circulation by sending them to an unretrievable wallet. (i.e. Ethereum). **Token unlock**: when early investors invest in a project they are promised the token at a sequence of later dates spaced over time, in order to become whales. The inevitable token sales won't drop the price dramatically when they do dump them.

5.3. Token distribution

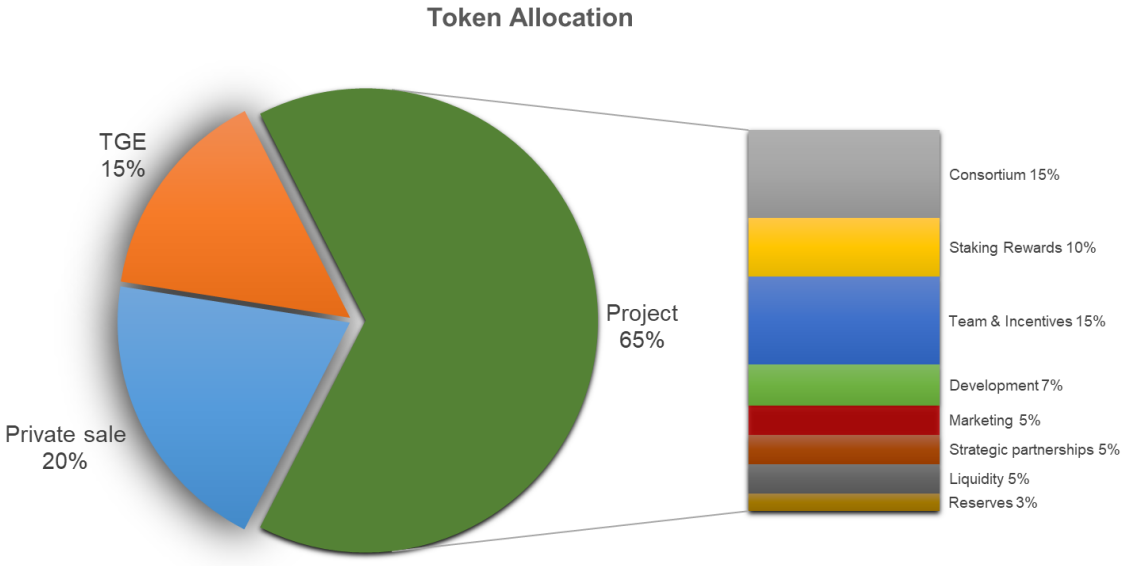
In order to start operations, and according to our roadmap (see 6. Development strategy) and financial projections (see 7.4 Financial approach), the target raise during the private sale is $2.000.000. Private sales include crowdloans, private and VC investments, and Web3 grants.

A second sale stage, that is, a public TGE, will be further assessed once operations start. It is expected[6] to follow a First-Come-First-Served (FCFS) Capped structure where a fixed number of tokens is sold at a fixed price on a first-come, first-served basis until all tokens are sold.

Token Name: COG
Total Supply: 1.000.000.000
Hard cap: $2.000.000

Sales stages	Percentage	# of tokens	COG Price	Funding Raised
Private	20%	200.000.000	$0,01	$2.000.000
Public TGE	15%	150.000.000	$0,015	$2.250.000

The token allocation is as follows:



20% of the total supply of 1.000 million COG will be allocated to the Private sale to start funding the project. 15% will remain for the public TGE and the rest of the tokens (65%) will be allocated for the project stakeholders and to keep fostering the project development and marketing.

[6] These features and figures are our projections based on a forecast before launching the project and are subject to change.

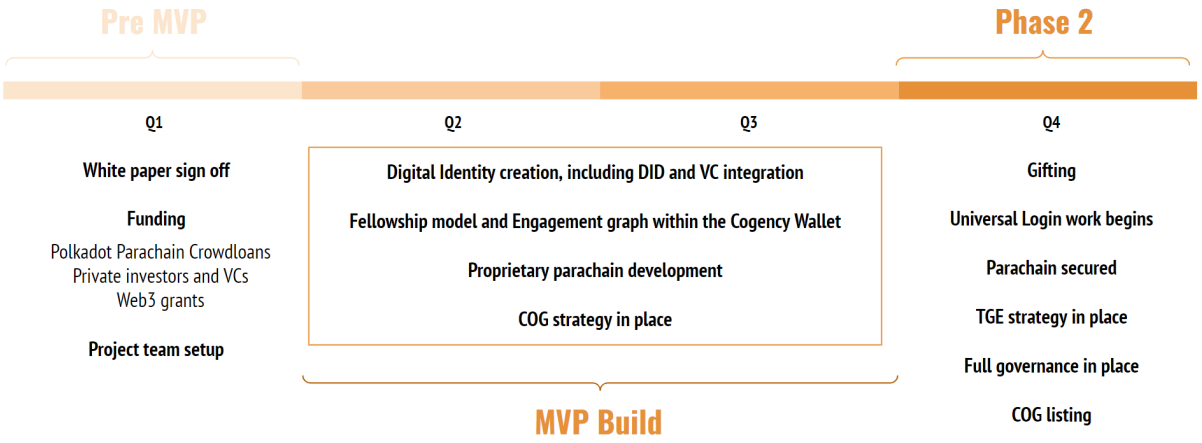
The following vesting schedule[7] will apply to protect the project, preventing early selloffs to ensure the long-term commitment and engagement from stakeholders, with longer locking and vesting schedules for the Cogency team:

Item	Percentage	Vesting schedule
Private sale	20%	Locked for 9 months with a linear vesting over 6 months.
TGE Public sale	15%	Unlocked and Unvested.
Consortium	15%	Locked for 9 months with a linear vesting over 12 months.
Staking Rewards	10%	Unlocked and Unvested.
Team & Incentives	15%	Locked for 12 months with a linear vesting over 24 months.
Development	7%	Locked for 12 months with a linear vesting over 24 months.
Marketing	5%	Locked for 12 months with a linear vesting over 24 months.
Strategic partnerships	5%	Unlocked with a linear vesting over 6 months.
Liquidity	5%	Unlocked and Unvested.
Reserves	3%	Unlocked and Unvested.

[7] Vesting schedule is an incentive program that gives a user lump sum benefits of stock options. A vesting schedule allows a company to reward users who stay longer and more engaged with the company and penalise users who terminate their contracts early on.

6. Development strategy

Cogency's 2023 roadmap is as follows:



The first quarter of 2023 will be dedicated to finalising this paper, securing funding through private investment and setting up the team to build the MVP later in the year. We expect there to be further refinement of aspects of the ideas outlined in this paper throughout the year, but in particular in Q1.

The second and third quarters of the year will be dedicated primarily to building the initial products described in section 4. "Business Model and Solution" such as leasing a parachain slot, the Cogency Wallet set up, implementing the logic for both the Fellowship Model and Cogency Engagement Graph, together with VCs and DIDs to create the consumer's digital identity.

The fourth quarter of the year will see the product fully operational and live with associated governance put in place and with a pipeline for new features such as gifting and universal login. Full support and account management will be set up for publishers and users with onboarding strategies in place to build the community. Finally, 2023 will finish with the agreement of the public TGE strategy.

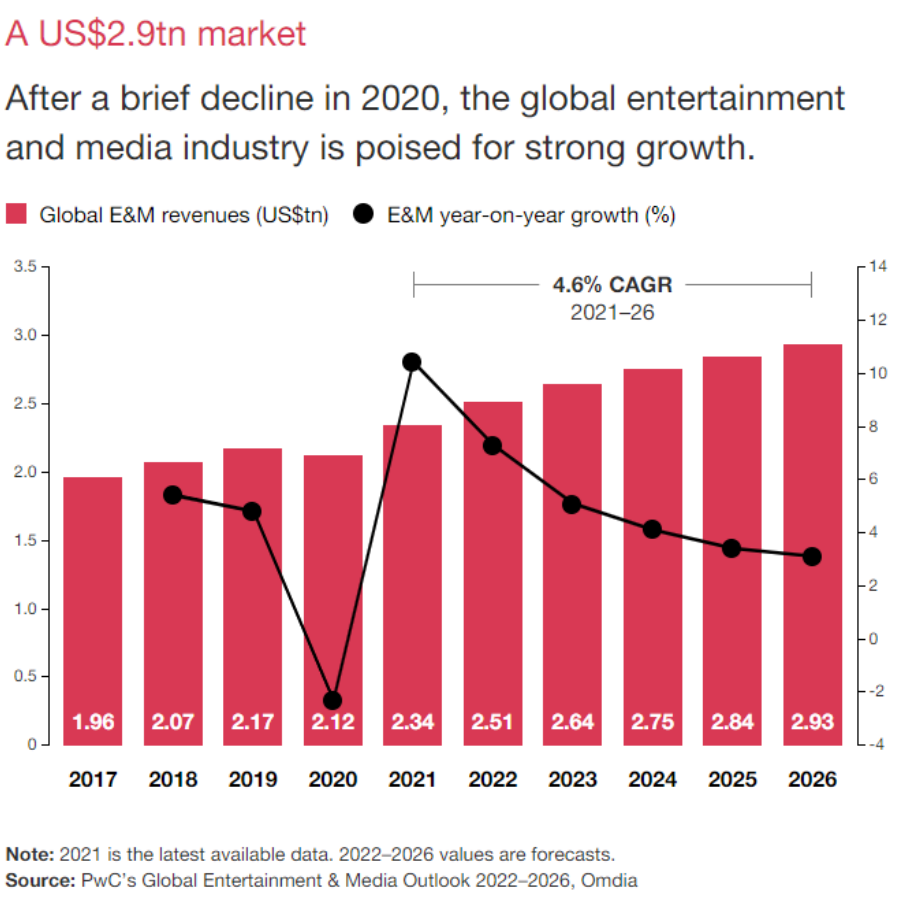
7. Business approach

7.1. Industry Analysis

In this section we will assess the attractiveness of the industry, the latest trends and the main factors that support its growth. We will continue with the analysis of the five main areas driving the industry outlook, and finally we will deep dive into the common mistakes that other projects made in the past, and our mitigation strategies for each of them.

7.1.1. Overview

Over the last few years there has been a trend towards the digital world. Covid-19 accelerated this, and more people are consuming media and entertainment from their personal devices without relying on paper. After a difficult 2020, in 2021 the Entertainment and Media industry recovered some of its growth path, with revenues rising by 10.4%, with a projected forecast of almost US$3tn in five years from now:

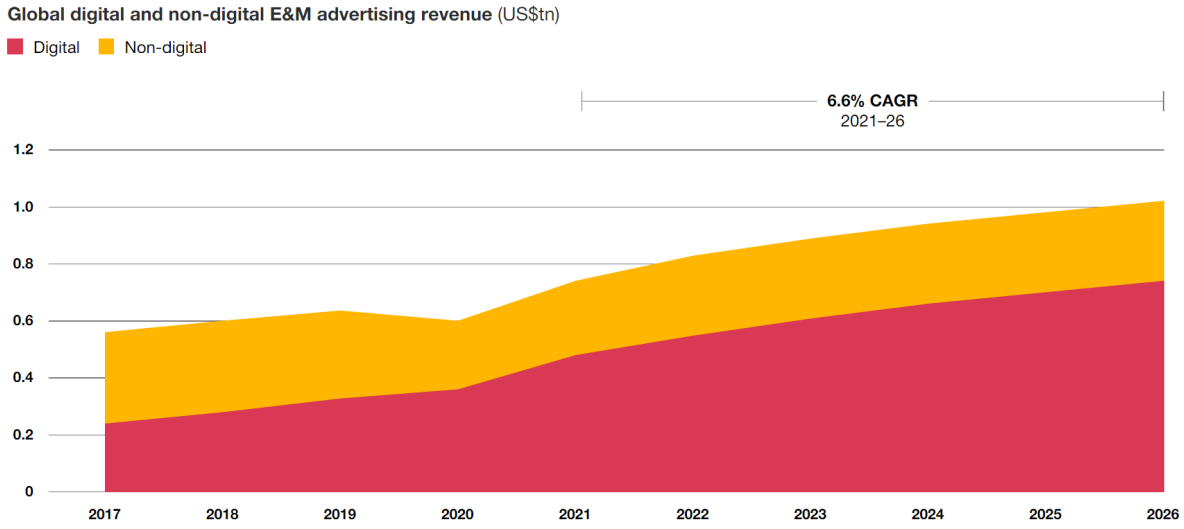


Note: 2021 is the latest available data. 2022–2026 values are forecasts.
Source: PwC's Global Entertainment & Media Outlook 2022–2026, Omdia

There are two factors that support this growth. On the one hand, the growing power of advertising, which fell nearly 7% in 2020, grew by 22.6% in 2021, representing 32.2% of the industry revenues. It is expected to grow at 6.6% CAGR by 2026, becoming a US$1tn market. And on the other hand, the increasing digitisation of the industry. Non-digital advertising is stagnating, whereas digital revenue is forecast to expand at 9.1% CAGR to reach US$723.6bn in 2026, at which point 74% of revenue will be mobile[8]:

A US$1tn advertising market

Marketers will keep spending more to meet customers where they are—in digital spaces.



Note: 2021 is the latest available data. 2022–2026 values are forecasts.
Source: PwC's Global Entertainment & Media Outlook 2022–2026, Omdia

There is fierce competition to obtain market share in the digital news media industry, and the market entry for new companies is mostly dependent on the business model they adopt: paid subscription versus free. Most businesses also rely on revenue from advertisements. At a local level, local publishers find it difficult to commercially survive as a result of this competition for market share. These local publishers require new technology and approaches that stand out to users in order to improve their bottom line and survive longer-term.

Although growth projections are healthy, crucially most of the digital revenue models are underpinned by centralised data-gathering operations that risk becoming rapidly obsolete as the result of changes in legislation.

[8] Global Entertainment & Media Outlook 2022–2026 - https://www.pwc.com/gx/en/industries/tmt/media/outlook.html pwc, December 2022.

7.1.2. Industry Outlook

Innovation is one of the key drivers for success, and the news media industry outlook is being driven by five main areas[9]:

1. Audio and Podcasts. The advertising in these areas has not only recovered but it has grown. Back in 2006, only 22 percent of the adult population in the United States was aware of podcasting. By 2021, this figure had risen to 78 percent. Podcasting is an increasingly popular pastime in the U.S. and there were an estimated 120 million podcast listeners in the country in 2021. Forecasts suggested that the number of podcast listeners would surpass 160 million in 2023 after increases of around 20 million each year[10]. The podcast boom has given birth to the audio story boom. As an example, after just 2 months offering audio versions of all Zetland[11] stories, 40% of consumption was audio. In 6 months, it was 50%. Today, audio articles are 80% of content consumption time.

2. Live entertainment. The pandemic will have had an impact for the next few years. The challenge for entertainment venues may be attracting those less eager to venture outside the home. Venues can show live streams of onsite events to reach a broader audience, which provides a scalable business solution to increase revenues.

3. E-commerce on social media platforms is a popular form of shoppable media, and people are buying in increasing numbers, with social commerce sales expected to reach more than US$36 billion in 2021 and US$45 billion in 2022[12].

4. NFTs are creating new business models through scarcity and exclusivity. By Q3 2021, NFT sales had generated an estimated $10 billion, compared to around $100 million in 2020[13]. An NFT proves the ownership of an underlying digital asset, therefore establishing a digital identity, rights and entitlement that are attached to that identity. Digital assets were once infinitely replicable, but with the authenticity provided by NFTs, digital assets can have finite supply.

5. Metaverse being the new reality. Although the metaverse is far from being mass adopted, there are already social games and social-gaming platforms hosting tens of millions of users, mostly young, in immersive environments offering competition, entertainment, and socialisation. Players buy and sell virtual goods, with the possibility of attending live entertainment events.

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[9] 2022 media & entertainment industry outlook - https://www2.deloitte.com/us/en/pages/technology-media-and-telecommunications/articles/media-and-entertainment-industry-outlook-trends.html Deloitte, December 2022.

[10] U.S. Podcasting Industry - statistics & facts - https://www.statista.com/topics/3170/podcasting/#dossierKeyfigures Statista, January 6, 2023

[11] Zetland is a Danish media company founded in 2012. Headquartered in Copenhagen, it publishes three to four news articles daily, focusing on long-form stories and in-depth articles. A subscription-based organisation, it had more than 18,000 subscribers as of November 2020.

[12] Insider Intelligence, "Social commerce surpasses $30 billion in the US," Insider Intelligence, - https://www.insiderintelligence.com/content/social-commerce-surpasses-30-billion-us July 7, 2021.

[13] Paul Sweeting, "NFT + entertainment: A special report," - https://variety.com/vip-special-reports/nft-entertainment-a-special-report-1235097686/ Variety, November 1, 2021.

7.1.3. Lessons learnt from past projects

There has been a number of journalism projects based on blockchain technology that have failed in the past[14]. These have provided us with some valuable lessons:

Issue from past projects	Our way to mitigate the risk
A centralised body within the project had the authority to reverse the community's vote, which resulted in the project losing credibility.	Cogency's community will have total control over their own metadata, and their interaction with publishers, putting governance in the hands of consumers and publishers.
Newsrooms relied on the project's websites and servers. Due to this reliance, Newsrooms may suffer if the project server is exposed to an attack or malfunction.	Cogency will take a decentralised approach balancing the load between both CMS and blockchain.
Buying the token was extremely complicated (44 steps).	A web2 interface will collect the user's data using a simple form and a wallet will be created/attached to the user, to build their digital identity.
The bigger your stack of the token is, the more sway you could exert over the community, which made the mechanism abusive.	High concentration of tokens will be avoided in both private and public TGE sales. One individual cannot hold more than 5% of the total COG supply.
Operating under the Ethereum blockchain, which was quite expensive due to gas fees.	Cogency will operate under proof-of-stake, which is 99.95% more energy-efficient than proof-of-work.
Too bureaucratic cryptoeconomics	Cogency's token strategy, including token's utility and workflow, features, model and distribution, has simple triggers and no layers of bureaucracy.

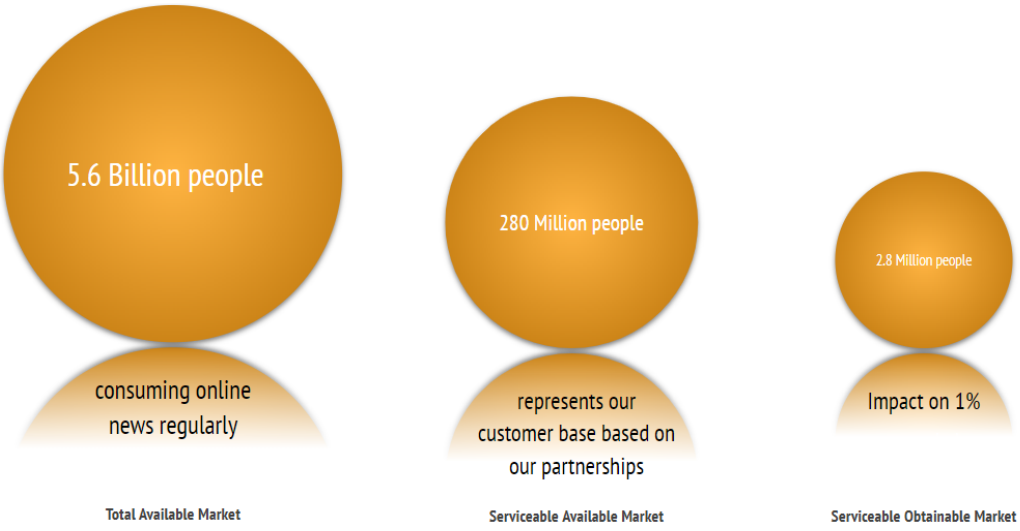
Due to the attractiveness of the industry as stated above, together with the industry knowledge of the project participants and the lessons learnt from previous projects, Cogency is in a strong position to stand and revolutionise digital identities for media and audiences.

[14] Further details in the project second deliverable - https://github.com/CogencyWeb3/Web3MediaPilot/blob/main/Deliverables/Cogency-Deliverable_2a2.md

7.2. Market Analysis

86% of Americans get news from digital devices using smartphones, computers and tablets[15]. This is similar to the European Union, where 72% consume news online[16], and Asia, where 70% of their population accesses news online on a regular basis[17].

With a global population growing at a steady 1% yearly having already reached 8 billion people in 2022, and considering a conservative scenario of 70% online news consumption across the globe, the Total Available Market (TAM) for the project is 5,6 billion people. Considering that the project, in a conservative scenario, will be able to partner with publishers representing 5% of the total customer base, the Serviceable Available Market (SAM) is 280 million people. Finally, assuming that only 1% of them will be willing to create the digital identity through our platform, the Serviceable Obtainable Market (SOM) is 2,8 million people:



As discussed in section 5. “Token Strategy”, this project can run being highly profitable without issuing the COG token, but having COG in place will however help create additional layers of value, such as both being the vehicle for the read-to-earn and the Fellowship Model, and the cornerstone for the governance and to build the community.

First, the fact that the COG token has a conservative, low price in both private ($0.01) and public ($0.015) sales makes the token’s potential liquidity greater than other projects[18] who sometimes have higher (and in some cases unrealistic) initial token prices and no solid utility underpinning them. Second, the Cogency team is already working with well established actors of both Web3 and Media industry and there is therefore proven engagement from key stakeholders to support the project launch.

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[15] Elisa Shearer - More than eight-in-ten Americans get news from digital devices https://www.pewresearch.org/fact-tank/2021/01/12/more-than-eight-in-ten-americans-get-news-from-digital-devices/ Pew Research Center, January 12, 2021.
[16] Consumption of online news rises in popularity https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20220824-1 Eurostat. August 24, 2022.
[17] https://newsinasia.jninstitute.org/chapter/how-asia-gets-its-news-news-consumption-trends-2016-2020/ News in Asia.
[18] ICO Drops - https://icodrops.com/ico-stats/

7.3. Financial approach

The financial projections above have been made taking into account the following conservative assumptions.

- A medium publisher has 25 million unique users per year.
- Cogency will be able to partner with 10 of them.
- The service obtainable market will only be 1%.
- The yearly average number of tokens purchased per consumer is 1.
- The number of yearly transactions is 30 million (12 monthly updates times the Cogency's customers).

Profit split:

	From Engagement	From traded tokens	From service fees	From transaction fees
Cogency	30%	10%	1%	0.25%
Publishers	70%	90%	-	-

The Income Statement Forecast is as follows[19]:

Income Statements Forecast

	2023	[% out of sales]	2024	[% out of sales]	2025	[% out of sales]	2026	[% out of sales]
Total Sales [1]	**$0.00**	100,00%	**$4,808,750.00**	100,00%	**$7,213,125.00**	100,00%	**$10,819,687.50**	100,00%
Engagement sales	$0.00	0.00%	$4,500,000.00	93.58%	$6,750,000.00	93.58%	$10,125,000.00	93.58%
Traded tokens sales	$0.00	0.00%	$2,500.00	0.05%	$3,750.00	0.05%	$5,625.00	0.05%
Service fees sales	$0.00	0.00%	$300,000.00	6.24%	$450,000.00	6.24%	$675,000.00	6.24%
Transaction fees sales	$0.00	0.00%	$6,250.00	0.13%	$9,375.00	0.13%	$14,062.50	0.13%
Total COGS	**$0.00**	0.00%	**$950,000.00**	19.76%	**$1,425,000.00**	19.76%	**$2,137,500.00**	19.76%
Engagement costs	$0.00	0.00%	$945,000.00	19.65%	$1,417,500.00	19.65%	$2,126,250.00	19.65%
Traded tokens costs	$0.00	0.00%	$5,000.00	0.10%	$7,500.00	0.10%	$11,250.00	0.10%
Gross Margin	**$0.00**	0.00%	**$3,858,750.00**	80.24%	**$5,788,125.00**	80.24%	**$8,682,187.50**	80.24%
Team salaries [2]	$360,000.00	0.00%	$720,000.00	14.97%	$720,000.00	9.98%	$720,000.00	6.65%
Infrastructure	$75,000.00	0.00%	$75,000.00	1.56%	$75,000.00	1.04%	$75,000.00	0.69%
Account Management expenses	$175,000.00	0.00%	$300,000.00	6.24%	$300,000.00	4.16%	$300,000.00	2.77%
General expenses: travel, meetings	$15,000.00	0.00%	$50,000.00	1.04%	$50,000.00	0.69%	$50,000.00	0.46%
EBITDA	**-$625,000.00**	0.00%	**$2,713,750.00**	56.43%	**$4,643,125.00**	64.37%	**$7,537,187.50**	69.66%
Parachain depreciation [3]	$150,000.00	0.00%	$150,000.00	3.12%	$150,000.00	2.08%	$150,000.00	1.39%
EBIT	**-$775,000.00**	0.00%	**$2,563,750.00**	53.31%	**$4,493,125.00**	62.29%	**$7,387,187.50**	68.28%
Taxes	$0.00	0.00%	$640,937.50	13.33%	$1,123,281.25	15.57%	$1,846,796.88	17.07%
Net Income	**-$775,000.00**	0.00%	**$1,922,812.50**	39.99%	**$3,369,843.75**	46.72%	**$5,540,390.63**	51.21%

[1]: The project MVP will be completed in 2023, therefore we are not considering sales for this period. Expecting 50% sales growth from 2025.
[2]: The MVP will span for 6 months during 2023, therefore the Team salary will double in 2024.
[3]: The parachain lease estimated cost is $150.000 yearly.

The funding structure will be split into two phases:

1. $775.000 to cover the MVP build during 2023 (see Net Income above). The funding will be obtained through private and VC investments, Web3 grants and crowdloans.
2. There will be a second round to raise operational costs for Year 2 (2024) of $2.000.000. The total needed will be aligned to the private sale of COG tokens which may reduce the amount needed in the investment round.

[19] Full calculations can be provided upon request.

8. Conclusion

The Cogency project has set out to research how the outcomes from data storage can be improved through some of the efficiencies created by decentralised cryptographic technologies, with a focus on decentralised digital identities for users consuming content online.

The project has been run as a coalition which includes publishers, technologists, academics, audience specialists, diversity and inclusion experts and Web3 pioneers. The purpose of working in a coalition like this has been to find solutions to some of the problems below, with practical proposals that could be actioned across the publishing industry in 2023.

More specifically, the problems we are solving are:

1. The current relationship between content creators and consumers suffers from an imbalanced data value exchange, where only creators have access to engagement data and as a result, consumers cannot fully benefit from their engagement.
2. The data gathered on consumers' engagement with content is mainly done in silos, from one content creator or content creator group to the next.
3. Because of this siloing, user acquisition and retention strategies are less efficient and more costly.
4. User-data plays crucial commercial and operational roles for publishers. However, regulation and legislation is being put in place in many jurisdictions which will greatly limit professional content makers' ability to gather and store user data.
5. Legacy, small and large, professional content creators have seen a gradual deterioration in the value of what they publish due to the changing economics of the advertising industry. As a result new funding models are needed to ensure there is a diverse, vibrant and professional content creator ecosystem.
6. The current relationship between content creators and consumers suffers from a lack of trust (in content creators) in part due to practices such as creating click bait to drive engagement.
7. There is little continuity in metadata for Web3 publishing environments which means it can be difficult for solutions to operate at scale.

As the Cogency project progressed, we focussed on creating a decentralised digital identity, the Cogency identity, specially tailored for content consumers (audiences) and creators (such as publishers), giving consumers agency over their online presence and generating benefits for both content creators and consumers. Consumers create their identity during the subscription or sign-up process with a publisher. Their engagement data is then stored on-chain and shared with other content creators who are in a coalition that accepts the Cogency identity. This can be done thanks to the anonymised, cryptographic solution developed by Cogency. We will use Polkadot for our Web3 infrastructure.

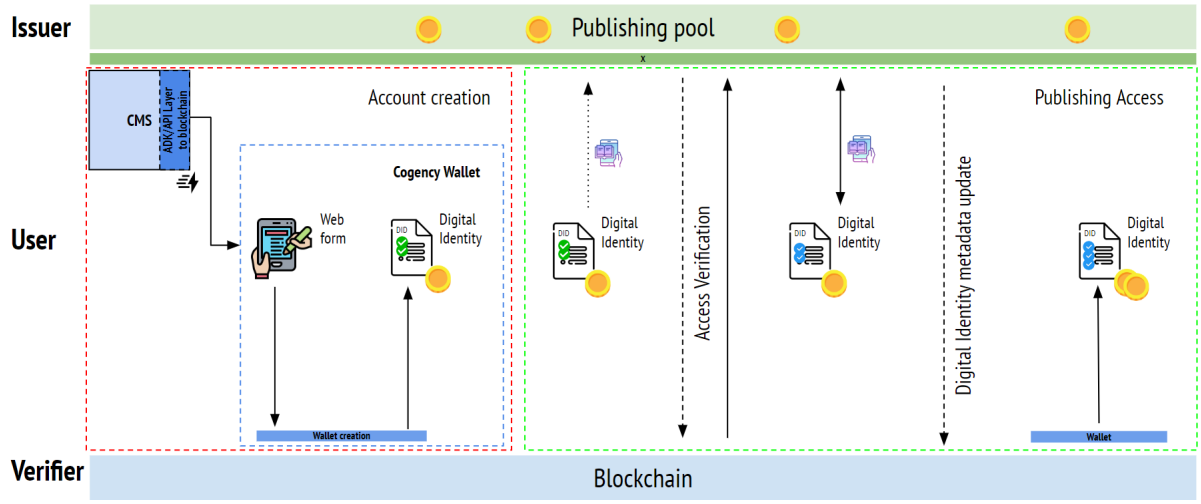
Our value proposition is as follows:

- Traditional fiat revenue is generated by providing a new permissioned service, the digital identity, that can be sold along with subscriptions, memberships and micropayments. The assumption is that circa 1pc of customers would currently be willing to pay an additional $0,5 per month to have a decentralised digital identity. Based on that assumption, medium sized publishers could each expect to receive circa **$750k-$1.25m** in additional annual revenue if they support the Cogency decentralised identity.

- Giving content consumers full control of their data across content platforms for the first time will also add value by giving content creators a much wider understanding of how users engage with content across platforms over time. We've developed a new concept - the '**Cogency Engagement Graph'** - to provide continuity in how engagement is measured across all the content a consumer accesses. The value in measuring engagement over time across platforms lies in improving the user retention and acquisition process for content makers. It will also provide value to content consumers. First, the targeting of the content/ads they receive will be maximised through personalisation. Second, they will be able to bargain with content creators by allowing them access or not to their data in return for goods or services, such as gifted content. We have introduced a **'Cogency Fellowship Model'** that rewards engagement with status and tokens for holders of the digital identity.

- Finally, there is also value from a new token we will be launching called the **COG Token**. This will work in a permissionless environment and give value to content creators, consumers and members of the blockchain community by creating new utility in the environment.

The process for the value proposition is as follows:



We are now at a point where we need funding and partners for the next phase of the project during which we will build our solution, outlined below.

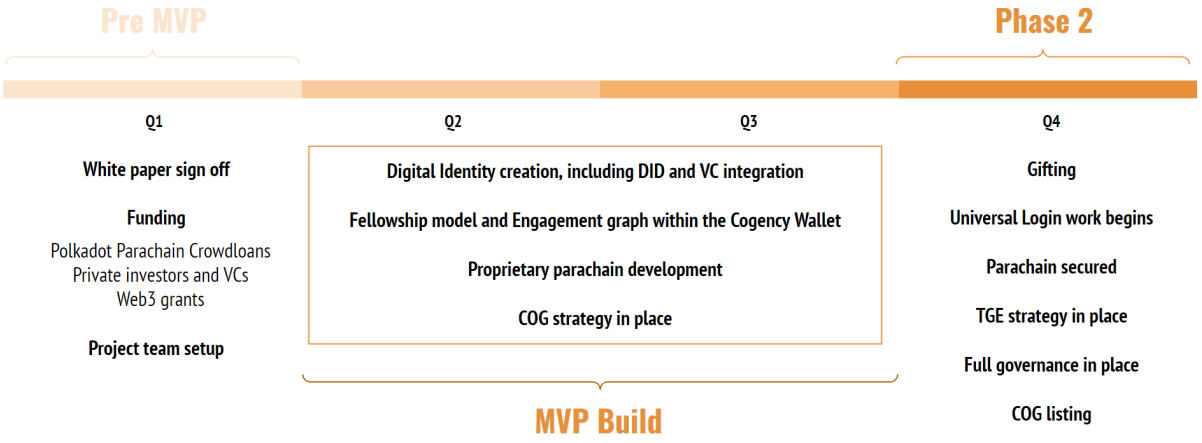
From a financial perspective, Cogency is expected to have a net income of **$2m - $ 5.5m** in years 2-4 (2024-26) from fiat transactions obtained when setting up new identities. Further details on the income statement forecast can be provided.

The token strategy is as follows:

- COG, the native Cogency token, will be a minted Layer 1 token built on top of the Polkadot's Layer 0 Relay chain, following proof-of-stake for the token creation. The fully diluted supply of the native Cogency token will be 1.000 million COG, with the smallest denomination being 10^{-8} (0,00000001 COG).

- In order to start operations, and according to our roadmap (see below and 6. Development strategy) and financial projections (see 7.4 Financial approach), the target amount we will raise during the private sale is $2.000.000. Private sales include crowdloans, private and VC investments, and Web3 grants. A second sale stage, that is, a public TGE, will be further assessed once operations start. The full development of the full Token Strategy will be a part of the next phase of the project.

Finally, the project roadmap is as follows:



Expecting a **Phase 2 2023 setup cost year of $775k** (Breakdown: $625k team and infrastructure; $150k parachain lease).

9. Appendix

List of all the project stakeholders:

Title:	Name:	Company:
Project Director	David Tomchak	Cogency
Project Manager	Raúl Jaramillo	Cogency
Web3 Advisory	Úrsula O'Kuinghttons	Web3 Foundation
Web3 Advisory	Radhakrishna Dasari	Web3 Foundation
Web3 Advisory	Walid Al-Saqaf	Södertörn University
Key Stakeholder	Stephen Fozard	WAN-IFRA
Publisher Stakeholder	Ciara Byrne	Condé nast
Publisher Stakeholder	Siobhan Keam	Condé nast
Publisher Stakeholder	Rose Duchatellier	Condé nast
Publisher Stakeholder	James Mawson	Global Corp. Venturing
Publisher Stakeholder	Heino Schaght	MediaHuis
Tech Stakeholder	Massimo Barsotti	EidosMedia
Tech Stakeholder	Cristiano Meda	EidosMedia
Tech Stakeholder	Brian Alford	Bright Sites
Publisher Stakeholder	Jessica Landon	Evening Standard
Publisher Stakeholder	Charles Yardley	Evening Standard
Publisher Stakeholder	Jatin Chauhan	Reuters
Publisher Stakeholder	Jane Barrett	Reuters
Publisher Stakeholder	Sophie Cassam	Le Parisien
Publisher Stakeholder	Violaine Degas	Les Echos
Publisher Stakeholder	Guida Pinto	Público
Diversity Advisor	Ramaa Sharma	Ramaa Sharma
Web3 Advisory	Ann Grimes	Stanford, Starling Lab

Project GitHub repository: https://github.com/CogencyWeb3/Web3MediaPilot