



# A Decentralized Social Identity Platform

2018 • WHITEPAPER

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# INTRO

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Monopolistic companies like Facebook and Tencent generate billions of revenue every year from petabytes of social data collected from everyday users. However, users have little knowledge of the magnitude of data companies compile about their online behavior.

In fact, they rarely intentionally consent to the tracking of their online interactions.

Online advertising incentivizes these companies to disingenuously encourage users to undertake all online interactions through their one single platform. This results in a user's online identity becoming alarmingly dependent and centralized on one platform, providing users little flexibility to freely interact with other platforms.

Furthermore, opaque legal language can result in arbitrary flagging of a user's action as "non-compliant" by broad machine learning algorithms, potentially resulting in the disabling of one's account, frequently without any legal recourse.

Companies disproportionately profit from wielding the power of holding user data hostage, and security flaws of data storage strategies can lead to uncompromised data by malicious hackers.

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# The Lyfe Foundation envisions a future where:

- 01 Users can conveniently utilize one single universal login to access all participating Applications across different infrastructure blockchains
- 02 Users, through convenient means, are able to explicitly consent to data collection by an Application
- 03 Users are financially incentivized to “lease” access to their data through compensation by an Application via cryptocurrency
- 04 Users have full transparency into the data that is being tracked by and shared with an Application
- 05 Users can, on demand, revoke or partially limit access to their personal data by an Application
- 06 Users will receive additional rewards with the growth of his/her own social sphere as more connections opt-in to the ecosystem
- 07 Users can arbitrarily leave a platform while preserving one’s right to globally participate on other platforms without penalty

We envision that decentralizing online social identity under these principles gives the power of data back to the individual, and at the same time, allows every world citizen to become connected without becoming beholden to a single platform — the way it should be.

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# GLOSSARY

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## THE FOUNDATION

The Lyfe Foundation

## PERSONA

A customizable online sub-identity that Users can deploy as a data interface to a specific class of Applications.

## PROFILES

Snapshots of static data associated with a specific Persona of a User.

## CONNECTIONS

Lyfe ID's of other Users who have publicly interacted with a User's Persona through the Lyfe Identity Protocol.

## SESSIONS

Records of behavioral data that Users allow Applications to collect in exchange for financial compensation with respect to a specific Persona.

## LYFEGOODS

Virtual assets that can be minted by Developers with LyfeCoin as the parent currency.

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**MICROSERVICE**

A web service that runs a unique process and communicates through a well-defined, lightweight mechanism to serve a specific business goal.

**API**

A set of functions and procedures that allow the creation of applications which access the features or data of an operating system, application, or other service.

**SDK**

Software Development Kit under the Lyfe ecosystem.

**SMART CONTRACTS**

Applications that run on the Ethereum blockchain exactly as programmed without any possibility of downtime, censorship, fraud or third-party interference.

**GDPR**

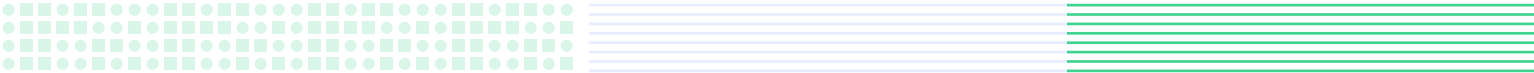
New privacy laws that the European Union (EU) plans to implement in May of 2018: the General Data Protection Regulation (GDPR). They are designed to harmonize data privacy laws across Europe, to protect and empower all EU citizens data privacy and to reshape the way organizations across the region approach data privacy.

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# THE LYFE IDENTITY PROTOCOL

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With the Lyfe Identity Protocol, the future of identity is decentralized, giving the ownership of identity back to the individual while providing a safer environment for data security. In this future, a person’s identity is not an administrative mechanism for corporations to control – every individual human being is the administrative source of their own identity. With the Lyfe Identity Protocol, Users have the power to control their identities, privacy, or celebrity as they prefer.



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And most importantly, Users have the power to freely consent to or refuse access to identity and behavioral data.

The Lyfe Identity Protocol will be implemented on all major infrastructure blockchains, enabling a seamless single sign-on experience for users cross-chain on Ethereum, Neo, Cardano, Eos, Nebulas, and other projects. Initially, Lyfe will use the Ethereum Blockchain as a decentralized certificate authority to map a user's identity to a public key. Through Smart Contracts and decentralized offchain storage, the Lyfe Identity Protocol will enable Users to manage their core identities as well as deploy context-specific "Personas" for different Applications.

Through the Lyfe Identity Protocol, a true Data Marketplace can be achieved where Users can explicitly consent to data collection by Applications for financial compensation through LyfeCoin.

The Foundation envisions that this can enable a future where each data point has an exact value that should be paid to its creator. This allows data creators to retain ownership of their contribution and attaches to it a value that can be measured. The value of the data is given by its utility in subsequent use and computation by Developers. This allows data to be consensually collected from Users while compensating them in a fair manner for their contributions. This provides a marketplace where a User can choose to allow paid access to their data on their own terms.

Through the Lyfe Identity Protocol, the Foundation envisions enabling decentralized self-sovereign identity that no central organization can own or control, where the ability to lookup and discover identities and data can exist across decentralized systems. This protocol provides a mechanism for users to store data and social connections in a secure way while enabling them to precisely control what they decide to share with other Users and Developers.

A User's information cannot be shared without clear, explicit consent, where the User has the ability to decide who can access what subset of information, when they can access it, and for how long that access exists. The User can also revoke this access whenever desired. This is a world where anyone can be their own independent digital identity that no central organization can take away.





## USES OF LYFECOIN AS A CRYPTOCURRENCY

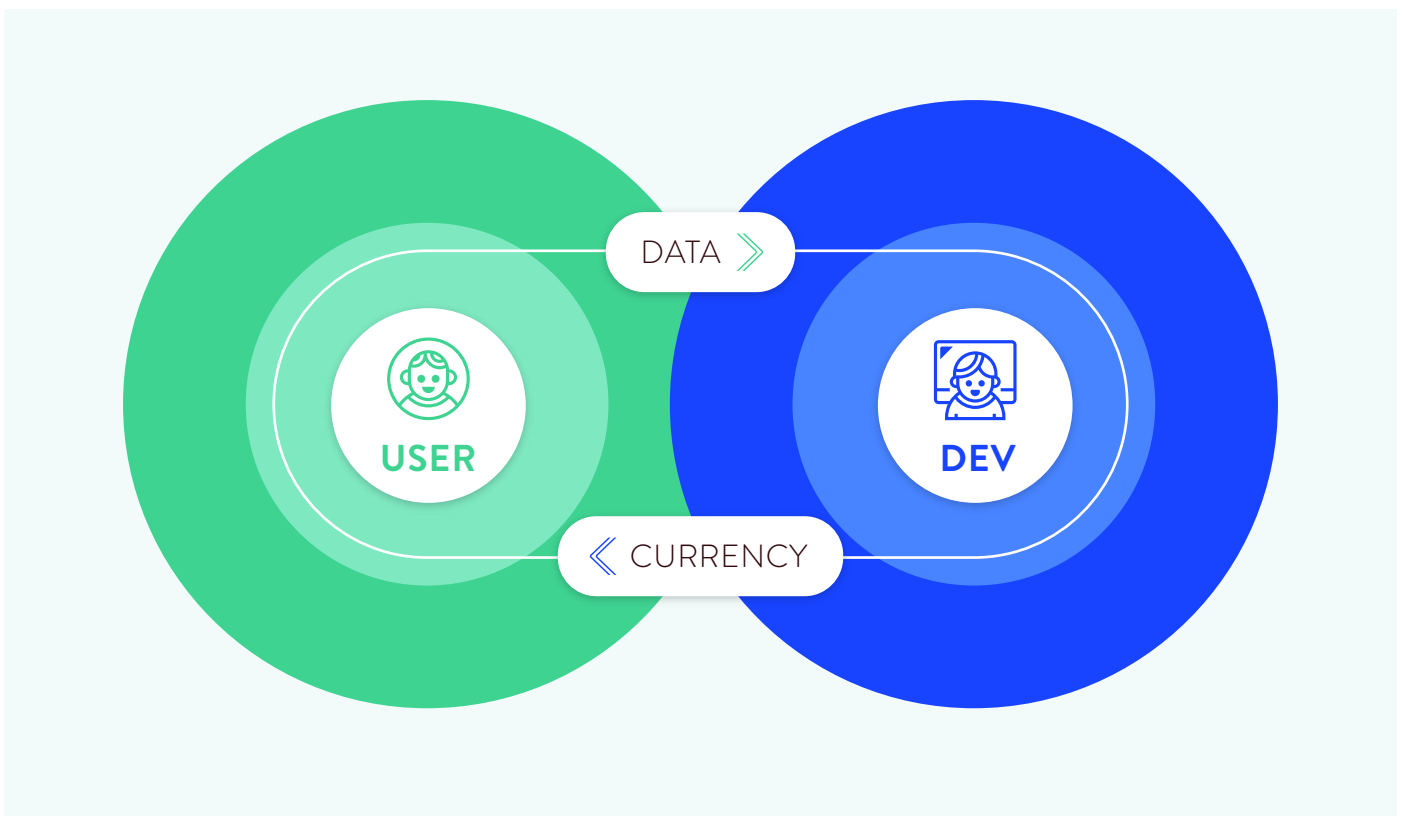
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LyfeCoin is the cryptocurrency that supports the economy of which the Lyfe Identity Protocol is running on. While the Lyfe Identity Protocol will be implemented on all major infrastructure chains, LyfeCoin will initially be deployed as a ERC20 token on the Ethereum network. Ethereum is currently the most popular and widely supported smart contract blockchain with an extremely vibrant development community and robust programming language support.

LyfeCoin can be used as an exchange of value within the Lyfe ecosystem, where:

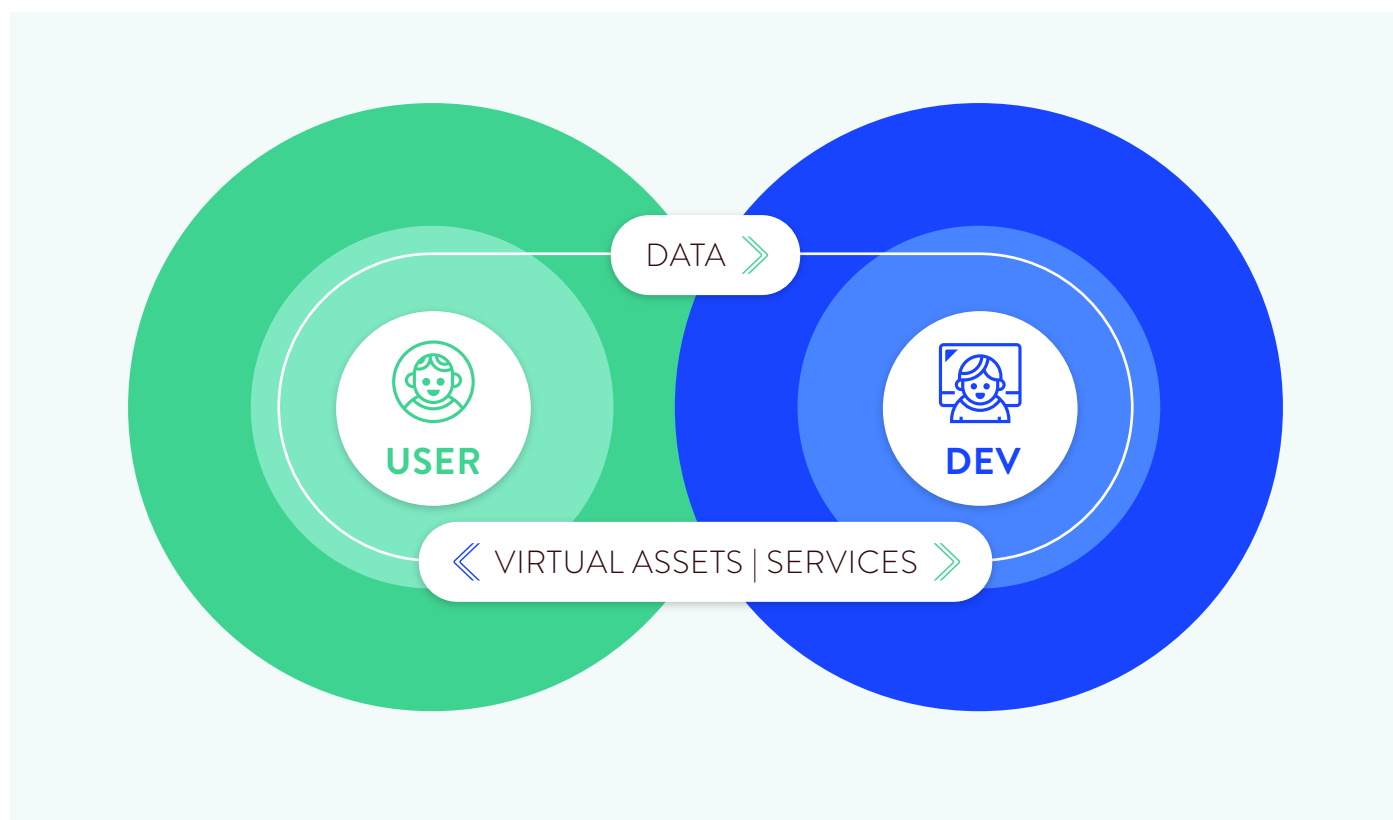
- 01 Developers pay Users for a snapshot of their personal data (Profile Data)
- 02 Developers pay Users to compensate them for the subsequent, consensual collection of behavioral data within an Application (Session Data)
- 03 Developers pay Users for a snapshot of their social graph -- friends, family, or other peers they have interacted with in the past (Connections Data)

#### LYFE'S DATA MARKETPLACE BETWEEN USERS AND APPLICATIONS



- 04 Users pay Developers to make a one-time purchase of in-app or cross-app virtual assets provided via the Application
- 05 Users can exchange these virtual assets back into Lyfecoin whenever desired
- 06 Users pay Developers to subscribe to recurring services provided by the Application
- 07 Users pay Developers commission to help streamline gas payment to expedite transactions run on the Ethereum network

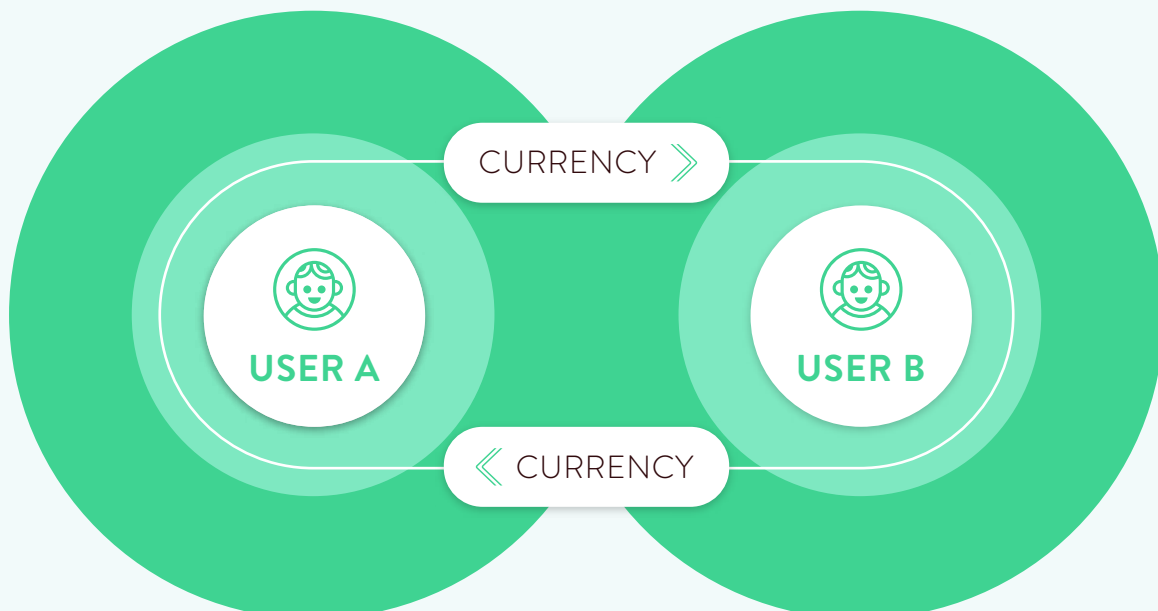
### LYFE'S DATA MARKETPLACE BETWEEN USERS AND DEVELOPERS



- 08 Users pay other Users through peer to peer transactions within the context of Social Applications, such as contests or multiplayer games

LyfeCoin is uniquely positioned to be the currency for exchange of value specifically for decentralized, self-sovereign identity. It facilitates the exchange of value for self-sovereign identity that is independent from any individual silo and free from the external control of centralized organizations. Not only can users make peer to peer transactions to each other, but also Developers can compensate Users for consensual collection of personal and behavioral data. Users can also compensate Developers for virtual assets and services subscribed to.

#### LYFE'S DATA MARKETPLACE BETWEEN USERS AND USERS



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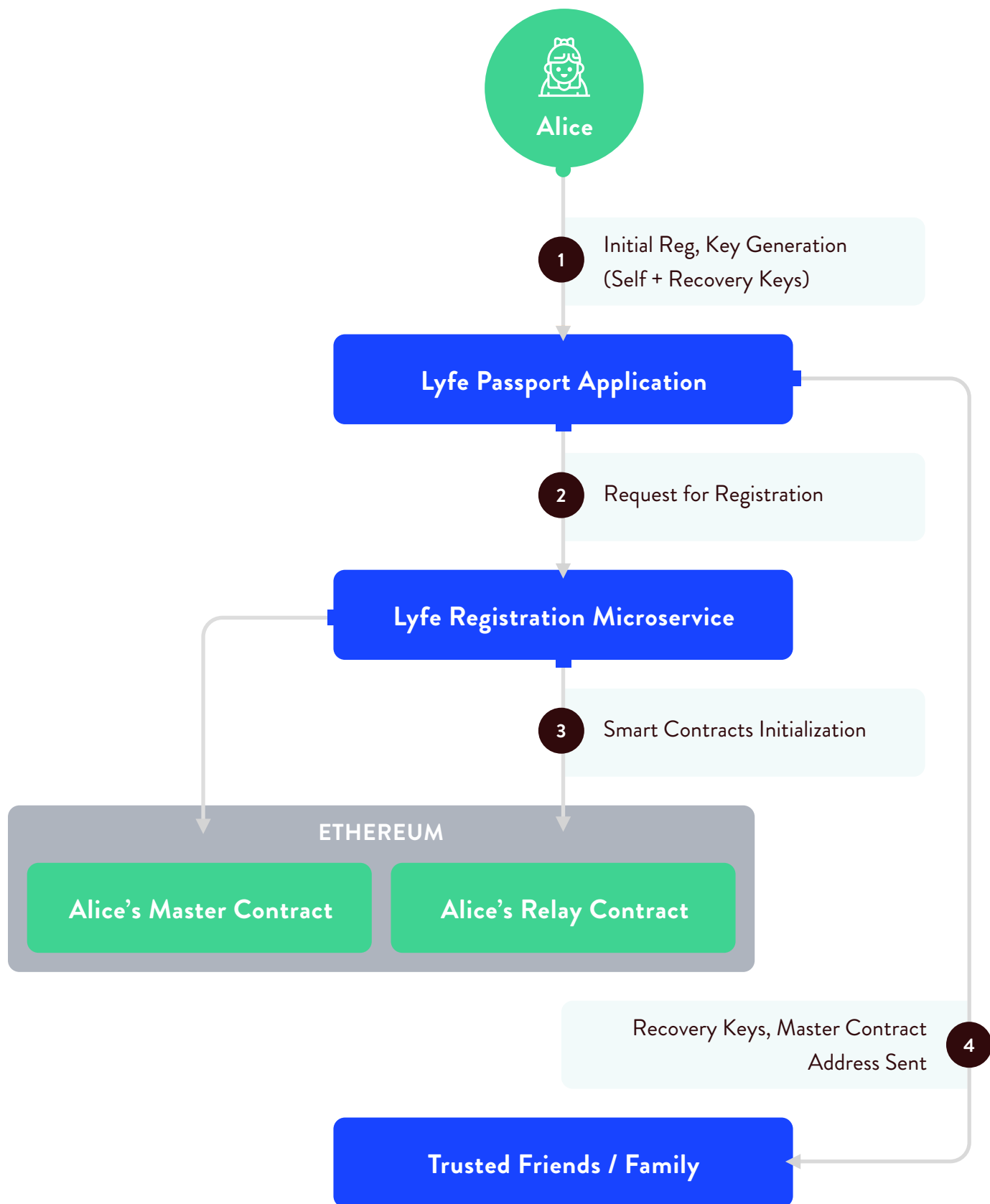
## HOW REGISTRATION WORKS FOR USERS AND DEVELOPERS

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While the Lyfe Identity Protocol will be implemented across all major infrastructure blockchains, the following sections will outline the architecture in this paper within the context of Ethereum. Users can start their accounts through the Lyfe Passport Application. During initial registration, Ethereum keys are generated and stored within the Passport Application.

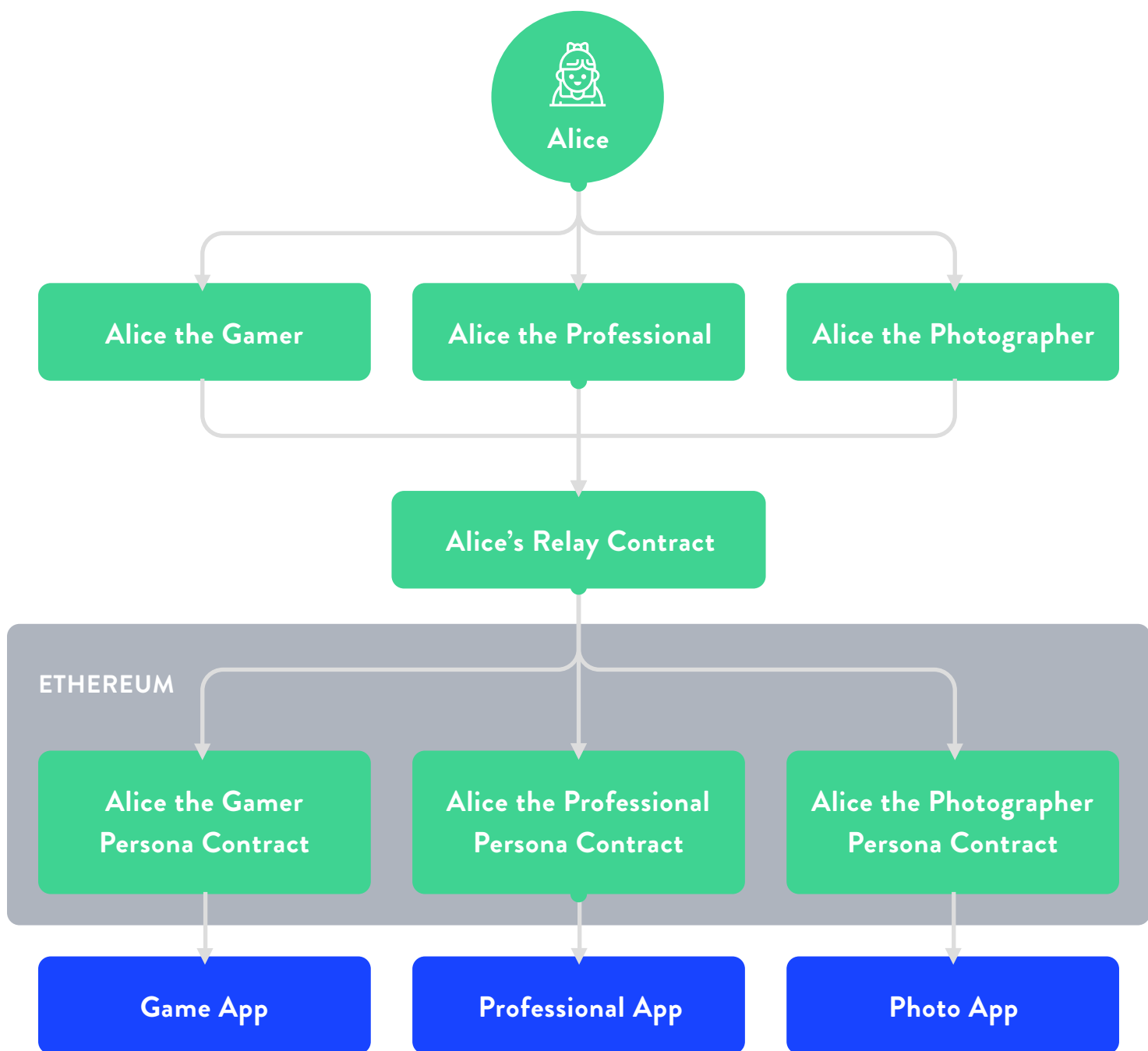
Next, Passport makes a request to the Lyfe Registration Microservice to initialize two Smart Contracts on the Ethereum Blockchain: a Master Contract and a Relay Contract. The User primarily interacts with the Relay Contract to forward transactions, manage different Personas, and can selectively grant or revoke an Application's access to personal data for configurable periods of time. The main purpose of the Master Contract is to help recover one's account in case the User's keys have been lost, using the Recovery Keys sent to trusted parties of the User during account creation.

### HOW A USER REGISTERS A NEW LYFE IDENTITY



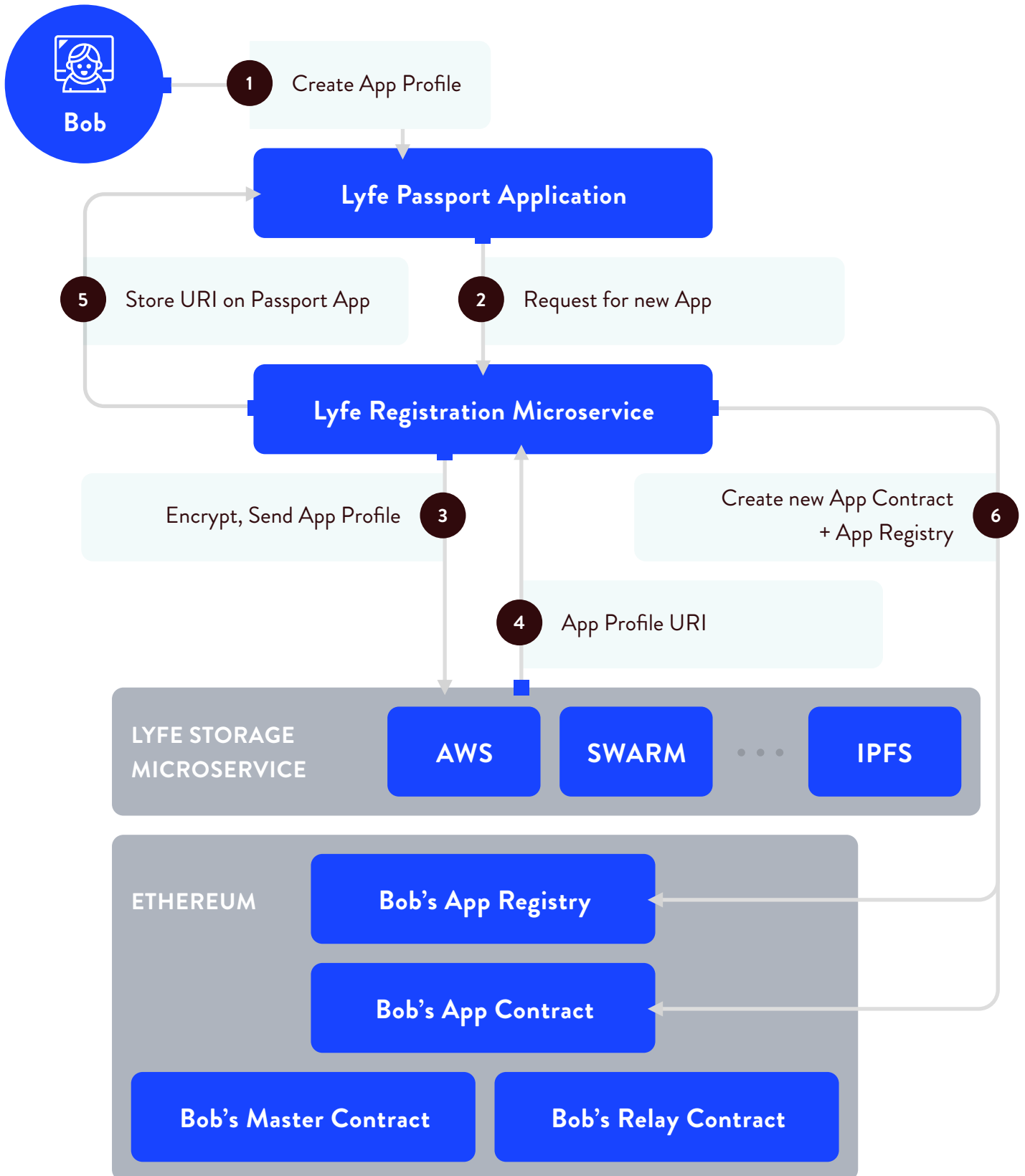
Through Passport, Users can then deploy a specific Persona Contract as a customized online sub-identity specific to a certain class of Applications. Profile, Connections and behavioral Sessions data associated with each Persona can be encrypted and stored on off-chain datastores via the Lyfe Storage Microservice.

### HOW A USER GRANTS ACCESS OF DIFFERENT PERSONAS TO DIFFERENT APPLICATIONS



Through a similar process, a Developer can register its own Lyfe account through the Lyfe Passport Application. Rather than managing Personas, a Developer manages Applications that interact with other Personas.

**HOW A DEVELOPER REGISTERS A NEW IDENTITY AND APPLICATION**





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## HOW DEVELOPERS COMPENSATE USERS FOR THEIR DATA

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The personal data of Users should not be simply given to central organizations where they are susceptible to misuse and hacking. An optimal scenario is if users own and control their data and consent to access and collection by Developers.

With the Lyfe Identity Protocol, data exchange is promoted to a consensual marketplace where Applications pay Users LyfeCoin for Persona data. Users can store their data in a private manner while retaining autonomous control, and will be able to lease access to their data to Developers. This creates an income stream for the User while providing a consensual manner for Developers to collect personal and behavioral data from Users.

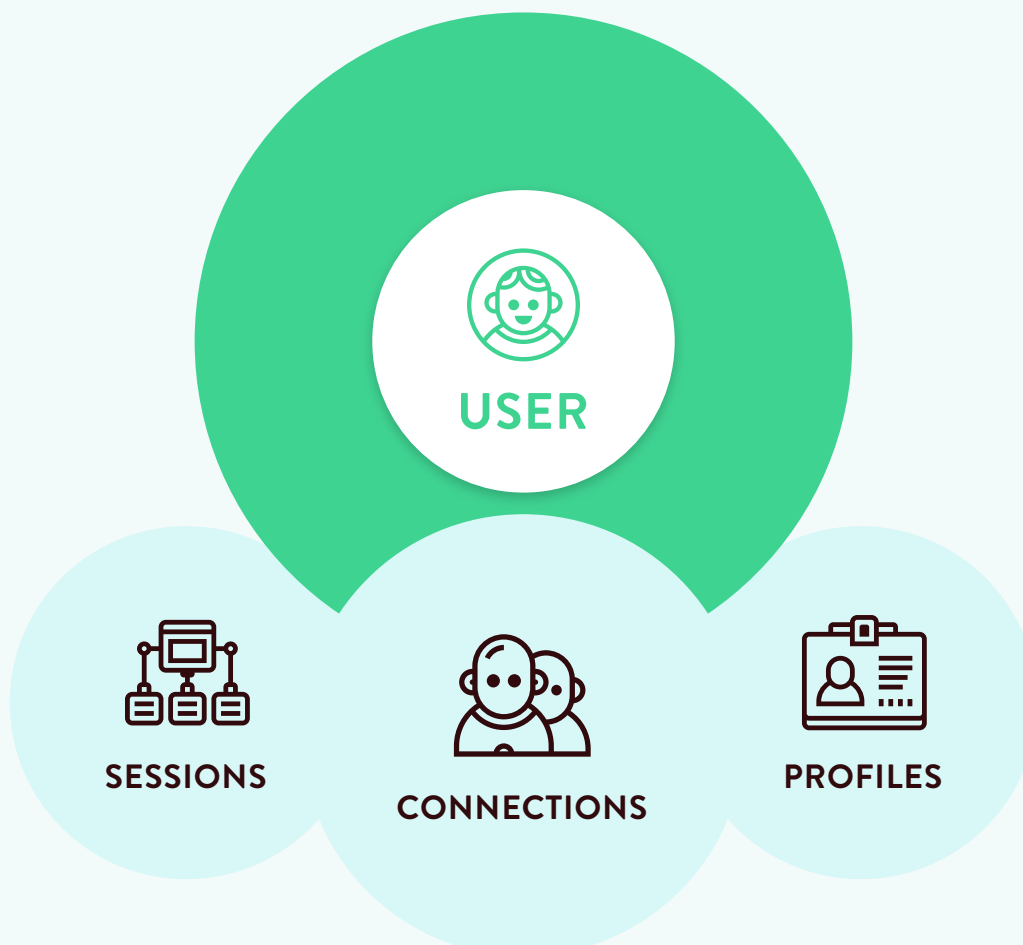
There are three types of Persona data: Profiles, Connections, and Sessions.

Profiles are snapshots of static data associated with a specific Persona.

Connections are Lyfe ID's of other Users who have publicly interacted with a User's Persona through the Lyfe Identity Protocol.

Sessions are behavioral datasets that Users allow Applications to collect in exchange for financial compensation. Typically, consensual access to Profiles and Connections can be automatically granted after payment by an Application, but Sessions are recorded after consent has been given.

## PERSONA DATA TYPES: PROFILE, CONNECTIONS, AND SESSIONS



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To request Profile or Connection data, when a User authenticates an Application through the Lyfe SDK, the Lyfe SDK via the Registration Microservice sends a request to the Developer for a payment in exchange for access to a snapshot of the User's Persona data. The Developer then makes the payment to the User.

The transaction hash is then sent back to the Registration Microservice and back to the User's Passport Application. Upon confirmation of the payment, Passport will automatically make a copy of the Persona Profile or Connections data, decrypt it, and encrypt it into a new copy with the Developer's public key. This copy is then stored on an off-chain datastore via the Storage Microservice.

The URI (Uniform Resource Identifier) of the new copy is then updated in the Developer's App Registry by the User's Persona Contract. This data can only be decrypted by the Application's private key.

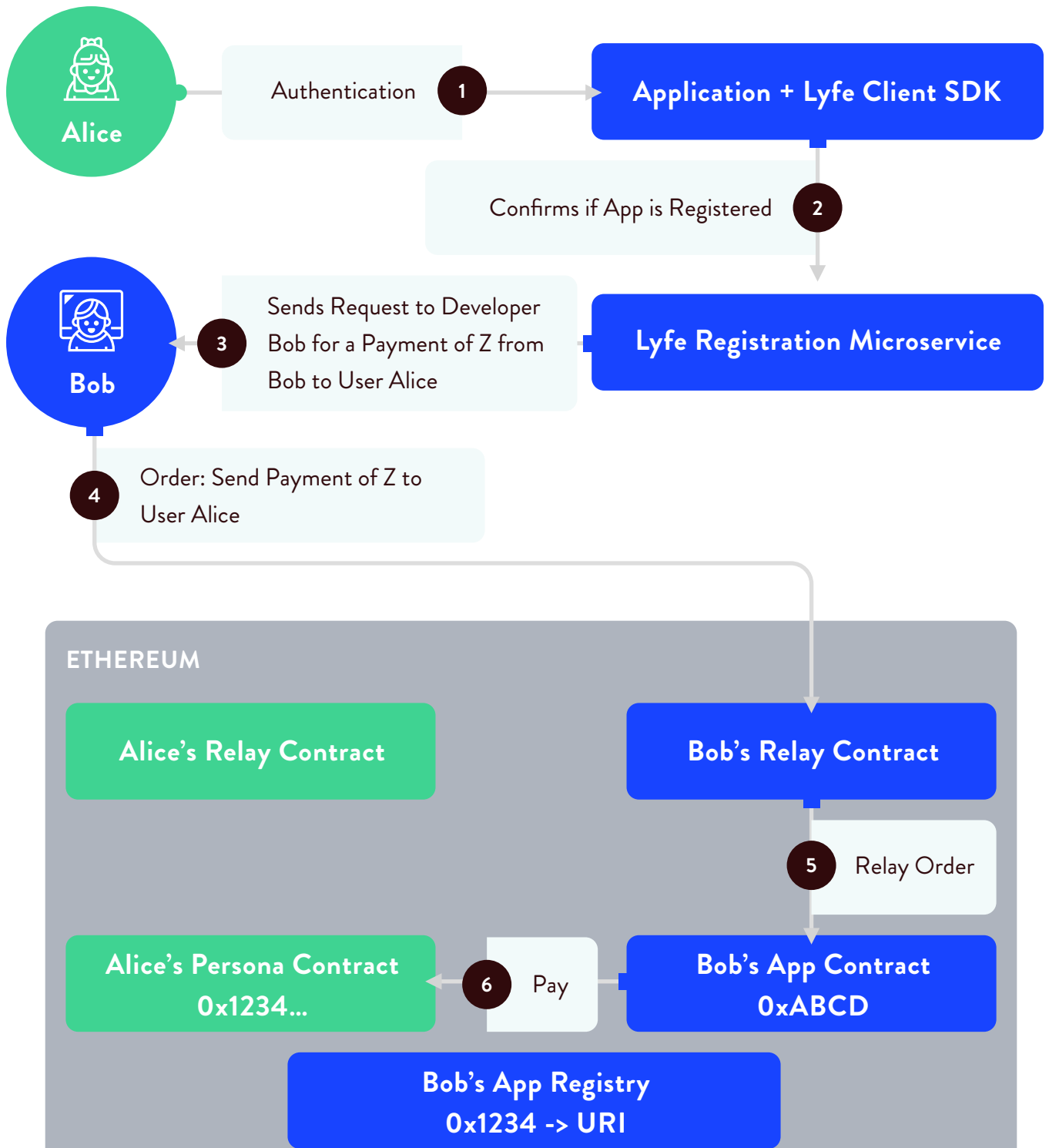
The User's Persona Contract is the only entity that is allowed to update the URI mapped in the developer's App Registry, so that the User has full control of what is stored there and can selectively continue to grant access or revoke it.

The same process above is also used for updating data for each Persona when it is stale, or when the Application is preemptively asking to record behavioral Session data. Using the Lyfe Analytics SDK, an Application can financially compensate a User after consent and then efficiently record behavioral events, automatically storing them off-chain through the Storage Microservice.

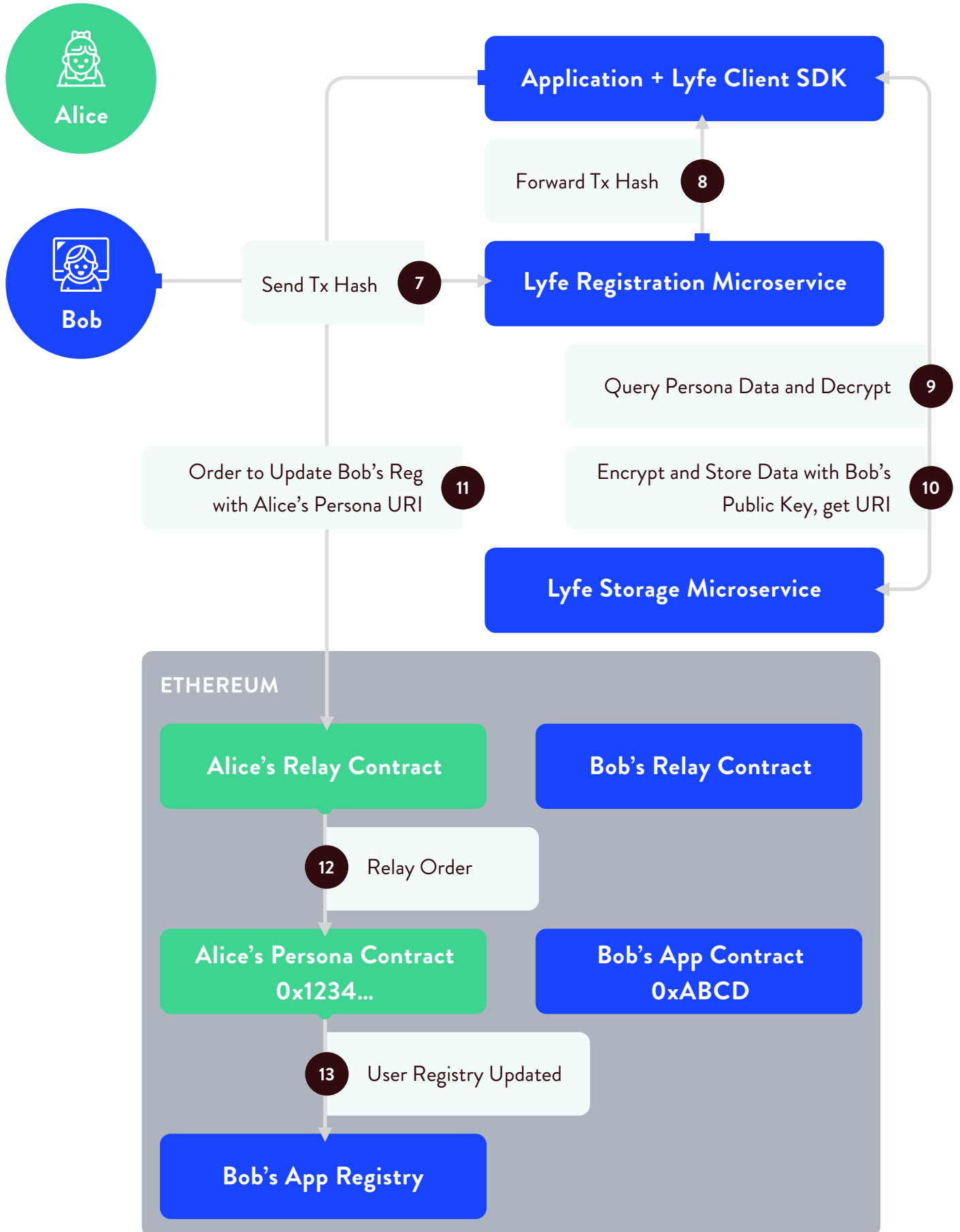
Through the Lyfe Web Portal, a User can view all Profiles, Connections, and Sessions data stored off-chain and access privileges to this data by Applications. The User can edit or revoke these access policies as well.



### DEVELOPER BOB'S PAID REQUEST FOR ALICE'S DATA: PART ONE



### DEVELOPER BOB'S PAID REQUEST FOR ALICE'S DATA: PART TWO



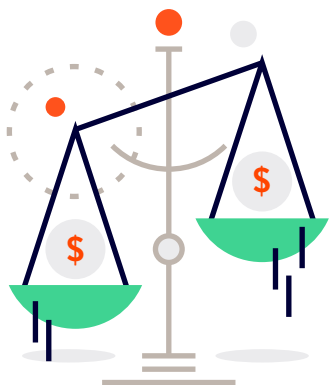


## PRIVACY BY DESIGN AND THE GDPR

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The EU plans to implement new privacy laws, the General Data Protection Regulation (GDPR), in May of 2018. If a company is deemed non-compliant, it could cost the company up to 4% of their annual revenue in fines. The GDPR will put restrictions on what kind of data Applications can collect, and it will force more transparency by prioritizing convenient ways for users to find out what personal data these companies hold on them.

The Lyfe Identity Protocol and its ecosystem of GDPR-compliant Developer Tools and Microservices provides efficient and user-friendly ways for Applications to transparently collect and analyze data from Users. Additionally, the public registry of data formats collected in the Schema service allow for global audits of what data is collected by various Applications.



**TOUGH PENALTIES**

Fines of up to **4%** of annual global revenue or **€20 million**, whichever is greater.

**OBTAINING CONSENT**

Easy to understand requests for processing personal data, and must receive an affirmative response.



**USER ACCESS**

Users may request a copy of personal **data in a portable format**.

**PRIVACY CONSCIOUS**

Products, systems and processes must consider **privacy-by-design** concepts during development.

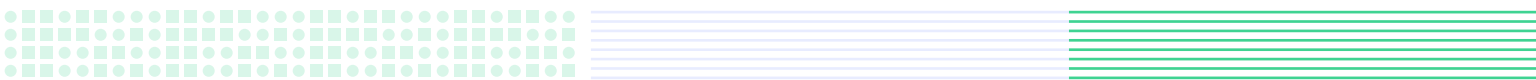
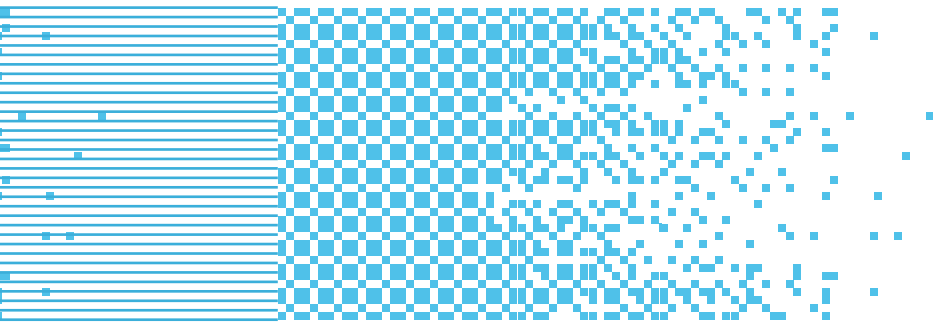


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# DEVELOPER SUPPORT AND INCENTIVIZATION

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The Lyfe Foundation aims to incentivize Developers to join the Lyfe ecosystem providing them with resources to become successful while achieving data governance standards that are GDPR compliant.





We are designing an ecosystem of tools and services for developers to help set them up for success. They include:

- 01** **GDPR Compliant Open Source Tools for Analytics**

  - *the Lyfe Consensual Analytics SDK: a mobile and web SDK with modules for user authentication, GDPR-compliant data instrumentation, and UI components for requesting consent for data collection*
  - *the Lyfe GDPR Compliant Analytics Engine: a distributed, JSON-based analytics engine designed for horizontal scalability, maximum reliability, and efficient management. Features include auto-pseudonymization, auto-parsing of data schemas, and a Query API modeled after Facebook's Analytics and Graph API*
- 02** **LyfeGoods:** Instantly mintable in-app and cross-app virtual items, using LyfeCoin as the parent currency
- 03** **the “Matchmaker” service:** a platform that helps Developers find groups of Users to conduct paid User trials
- 04** **the Lyfe App Marketplace:** a “Product Hunt”-like platform where Users can discover Applications based on how well they compensate Users for data, how high they score in terms of GDPR compliance, and crowdsourced ratings
- 05** **the Lyfe suite of services:** These services provide simple to use API's for Developers that facilitates and streamlines access to the Smart Contracts on the Ethereum blockchain

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**DEVELOPER SUPPORT AND INCENTIVIZATION**

—— ENABLING EFFICIENT  
CONSENT:  
THE LYFE CONSENSUAL  
ANALYTICS SDK AND  
GDPR-COMPLIANT  
ANALYTICS ENGINE

Currently, the GDPR has strict requirements for what consent is. They have defined the following six categories as the minimum information necessary for informed consent:

- 01 The Developer's identity
- 02 The purpose of data collection for which consent is sought
- 03 What type of data will be collected and used
- 04 The existence of the right to withdraw consent by the User
- 05 Information about how the data is used for decisions based on automated processing
- 06 If there are transfers of data to other countries and the possible risks of data transfers to those countries

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The Lyfe Foundation provides developers with the Lyfe “Consensual Analytics” SDK to collect and manage User data while efficiently fulfilling GDPR standards of consent.

The SDK provides a suite of User Interface components for developers to use whenever requesting the User’s consent for data collection. Features also include allowing Users to continue or abort data collection sessions, withdraw consent, and viewing what data is getting collected in real-time. The SDK also provides a simple API for the Developer to record in-application events and data generated by the User.

Additionally, the Lyfe Foundation provides Developers with the Lyfe Analytics Engine, an open-source, distributed, JSON-based analytics engine designed for horizontal scalability, maximum reliability, and efficient management while maintaining GDPR compliance.

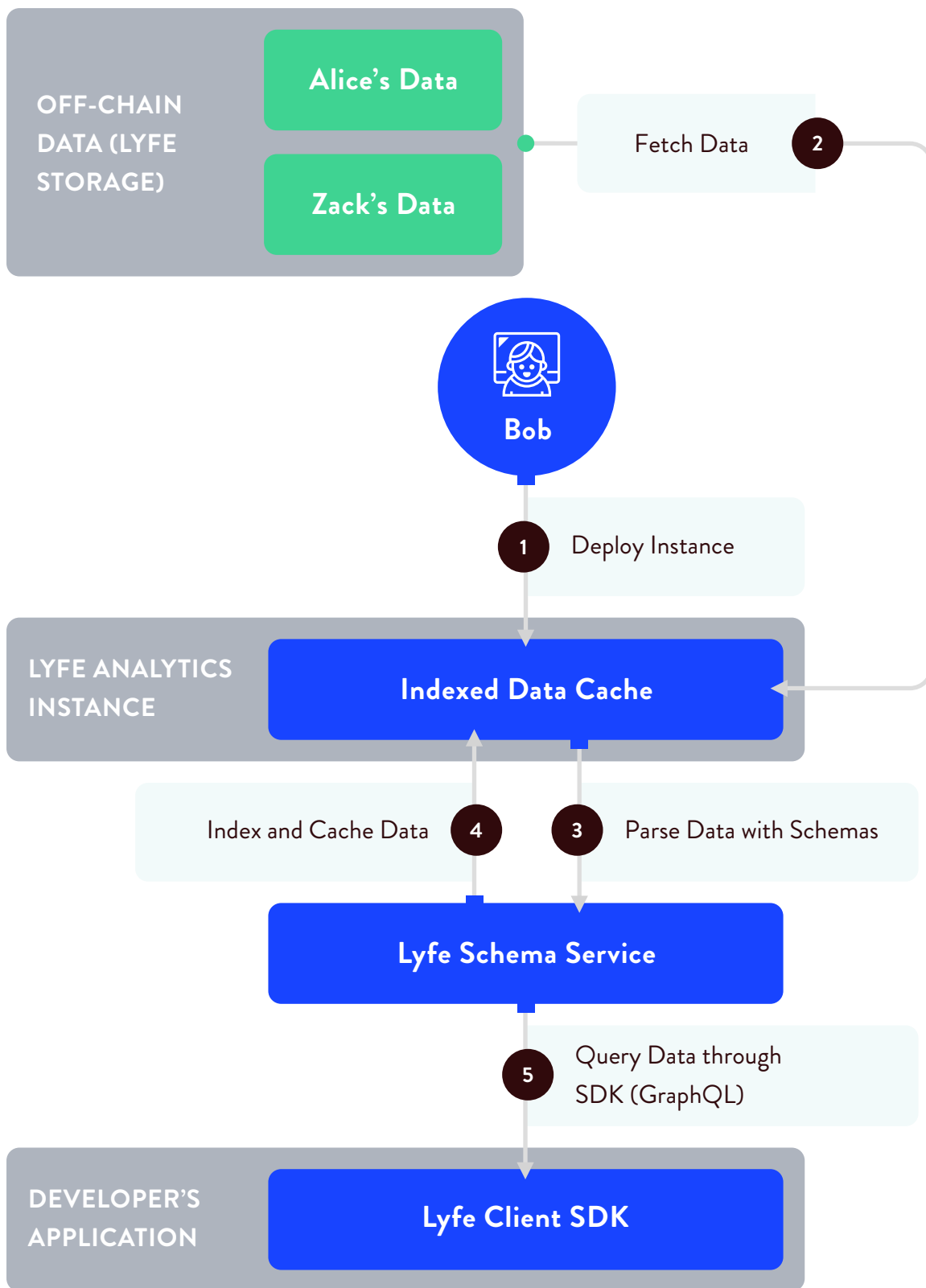
The Lyfe Analytics Engine can also auto-fetch and decrypt all off-chain user data referred to in all of the developers’ App Registries, auto-parse this data using schemas registered with the Lyfe Schema Service, and auto-index all of this data into time-based indices for efficient search.

Drivers for offloading this data into various satellite data stores through different programming languages will be provided to Developers to feed this data into algorithms in a GDPR-compliant manner.

Other features include auto-pseudonymization of the data, protecting the privacy of the data if a security breach were to occur. The Lyfe Analytics engine’s API emulates a subset of Facebook’s Analytics and Graph API, allowing Developers to extract value from social data of the User in a GDPR-compliant way.



LYFE ANALYTICS



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## DEVELOPER SUPPORT AND INCENTIVIZATION

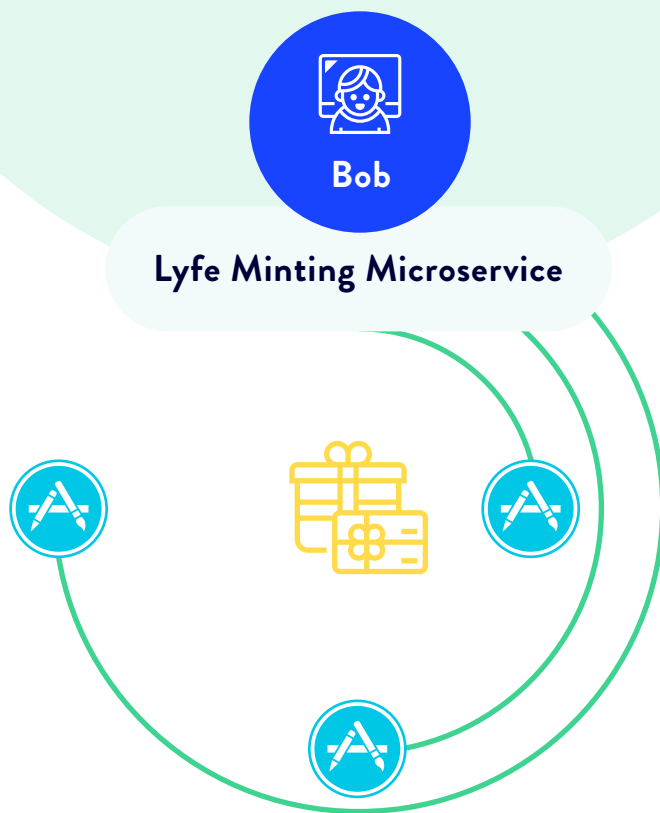
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### LYFEGOODS: INSTANTLY MINTABLE CUSTOM CROSS-APP VIRTUAL ITEMS

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Through Lyfe's "Minting" Service using Smart Contracts, Developers can mint LyfeGoods, custom unique in-app and cross-app items using LyfeCoin as the parent currency. This provides Developers a simple way of creating decentralized assets that work cross- application. These virtual assets can be traded between Users, or exchanged into LyfeCoin using the original exchange rate at the time of minting.

With this ability to mint virtual assets, Developers can easily develop their own virtual marketplace for custom virtual assets. Developers can also use cross-app LyfeGoods as a way to cross-promote Applications to Users. Users can keep all accumulated LyfeGoods in the Passport application.



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**DEVELOPER SUPPORT AND INCENTIVIZATION**

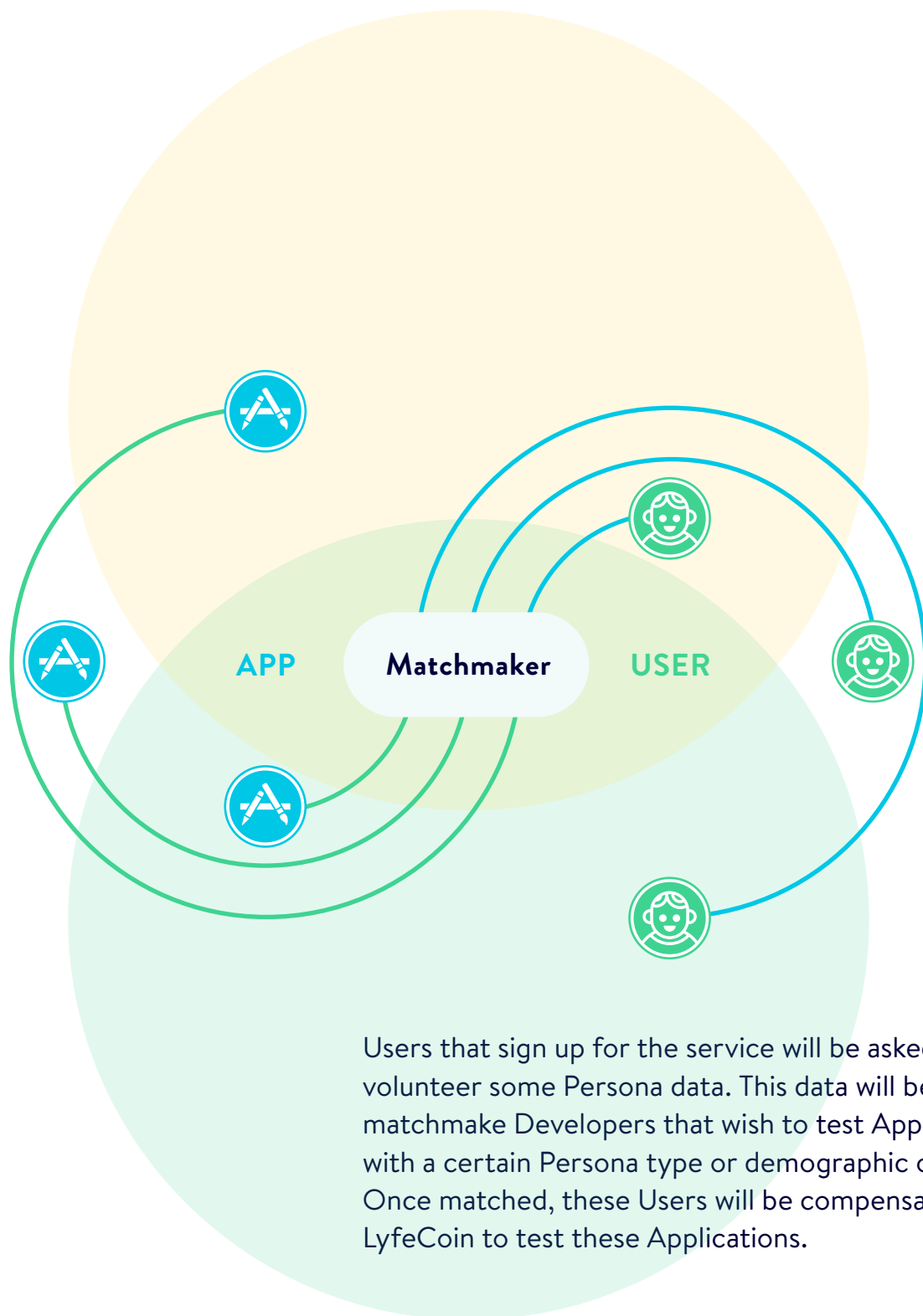
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**MATCHMAKER:  
INSTANT USER TESTING  
FOR DEVELOPERS**

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The Lyfe Foundation will also provide Developers with the “Matchmaker” service, which matches Users wishing to earn LyfeCoin with Applications willing to pay Users to test their applications.





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## DEVELOPER SUPPORT AND INCENTIVIZATION



# LYFE APP MARKETPLACE

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The Lyfe App Marketplace will be a “Product Hunt”-like platform where Users can discover Applications based on how well they compensate Users for data, how high they score in terms of GDPR compliance, and crowdsourced ratings. Applications can get submitted and upvoted, like Reddit and Hacker News. Users can voice their opinions about these products, encouraging the community to have conversations about their strengths and weaknesses.

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## DEVELOPER SUPPORT AND INCENTIVIZATION

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# LYFE ECOSYSTEM OF DEVELOPER MICROSERVICES

REGISTRATION

STORAGE

FUEL

RECOVERY

SCHEMA

MATCHMAKER

MINTING

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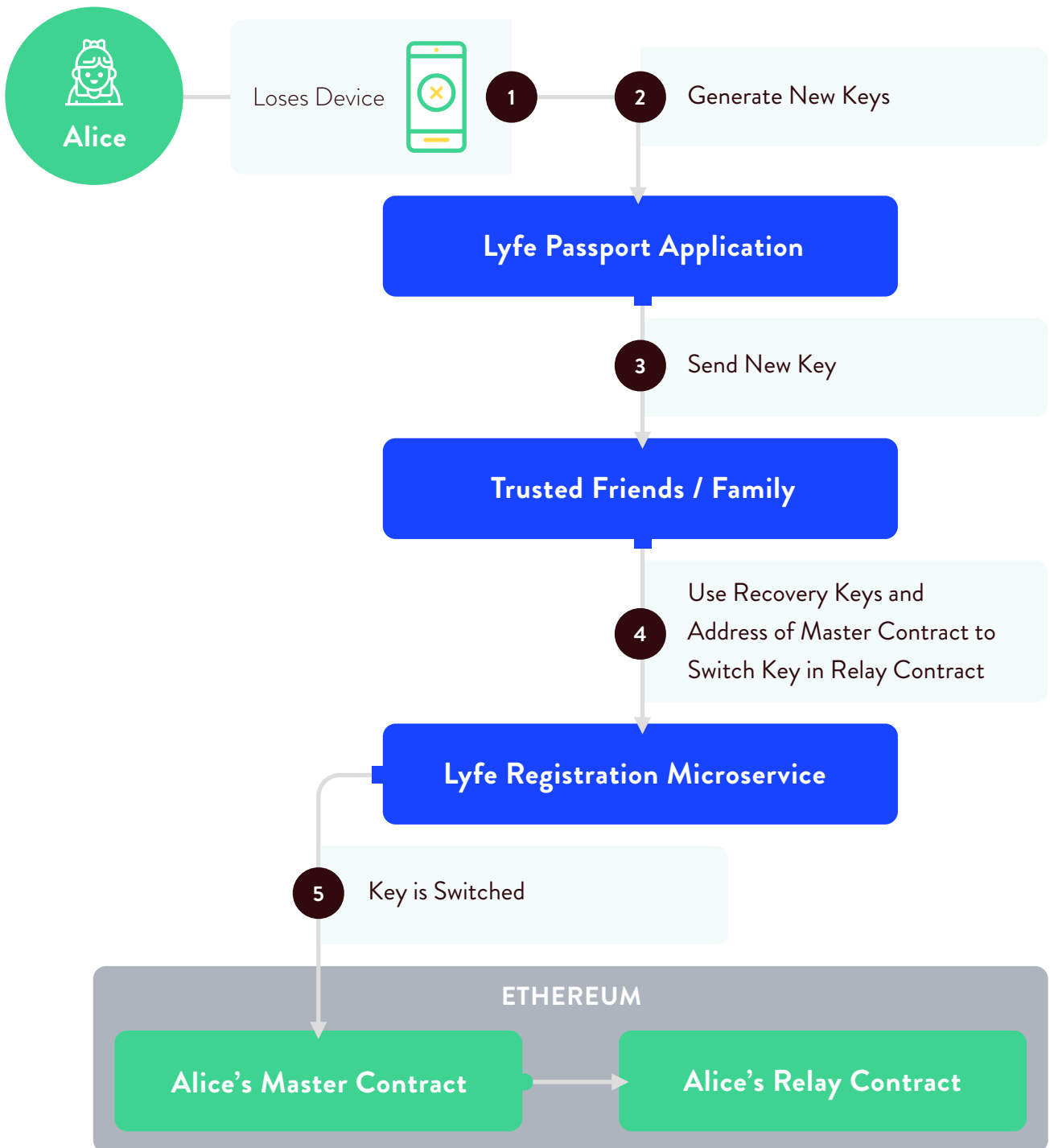
The Lyfe Foundation provides Developers with useful microservices, all of which can be replaced by other decentralized Services after the protocol is bootstrapped. These services provide a public API that facilitates and streamlines access to the Smart Contracts on the Ethereum blockchain.

The first service is Registration, which helps create all Lyfe identities on the blockchain, including the Master, Relay, Persona, App, and Registry Smart Contracts for both Users and Developers.

The second service is Storage, which helps the User store encrypted data, and helps Developers access these stores. When creating a Persona, the User can choose which storage backend services to use for their blocks of data (AWS, SWARM, IPFS, etc). This Storage service also supports GraphQL queries.

The third service is Fuel, which allows the Developer to pay for network transactions to fund network transactions for the User.

The fourth service is Recovery, which allows Users to recover their account in the case of lost keys. Users are able to replace the Master Contract controlling the Persona Contract in case of key loss by using the recovery keys generated during registration that were sent to trusted parties.



The fifth service is Schema, which allows the Developer to access schemas for all versioned data. Developers can pre-register the formats of the Persona data they collect in order to benefit from auto-parsing when querying the data with the Lyfe Analytics Engine. The following diagram shows examples of schemas collected from a User by different Applications:

## USING PUBLISHABLE SCHEMA FORMATS (W3C, LYFE, OR OTHERS) FOR DATA FORMATS

### GAMER PERSONA

```
{
  "@context": "https://www.w3.org/ns/activitystreams",
  "summary": "Alice's Game Stream",
  "type": "OrderedCollection",
  "typeHash": "fcf1e8c2cfc0a71c14dfda561c0f9e36",
  "timestamp": "1517762888",
  "totalItems": 2,
  "orderedItems": [
    {
      "type": "Win",
      "typeHash": "484b6d36695b5895695b5895695b5895",
      "actor": "https://leagueofgamers.com/@alice",
      "object": "https://leagueofgamers.com/battles/10HL6R"
    },
    {
      "type": "Loss",
      "typeHash": "95b9156f9326e3a09326e3a09326e3a0",
      "actor": "https://leagueofgamers.com/@alice",
      "object": "https://leagueofchamps.com/battles/BY5XWd"
    }
  ]
}
```

## USING PUBLISHABLE SCHEMA FORMATS (W3C, LYFE, OR OTHERS) FOR DATA FORMATS

## PHOTOGRAPHY PERSONA

```
{
  "@context": "https://www.w3.org/ns/activitystreams",
  "summary": "Alice's Photo Stream",
  "type": "OrderedCollection",
  "typeHash": "fcf1e8c2cfc0a71c14dfda561c0f9e36",
  "timestamp": "1517762888",
  "totalItems": 2,
  "orderedItems": [
    {
      "type": "Create",
      "typeHash": "988452c1881735195d591ae75d591ae7",
      "actor": "https://unsplash.com/@alice",
      "object": "https://unsplash.com/photos/Wypue0y8Gq8"
    },
    {
      "type": "Like",
      "typeHash": "f27c0fd4e4957e81e4957e81e4957e81",
      "actor": "https://unsplash.com/@alice",
      "object": "https://unsplash.com/photos/zFrUz_tNjCY"
    }
  ]
}
```

## USING PUBLISHABLE SCHEMA FORMATS (W3C, LYFE, OR OTHERS) FOR DATA FORMATS

## PROFESSIONAL PERSONA

```
{
  "@context": "https://www.lyfe.org/ns/profiles",
  "summary": "Alice's Professional Profile",
  "type": "OrderedCollection",
  "typeHash": "fcf1e8c2cfc0a71c14dfda561c0f9e36",
  "timestamp": "1517762888",
  "totalItems": 1,
  "orderedItems": [ {
    "type": "Professional Profile",
    "typeHash": "3d82268e985fc13e1bc8f0acc667c27b",
    "actor": "https://pronet.com/@alice",
    "object": {
      "firstName": "Alice"
      "lastName": "Smith",
      "location": {
        "countryCode": "us",
        "postalCode": "94720",
        "standardizedLocationUrn":
          "urn:li:standardizedLocationKey:(us,94720)"
      },
      "headline": {
        "company": "Lyfe Foundation",
        "position": "Software Architect"
      },
      "colleagues": ["https://pronet.com/@bob",
        "https://pronet.com/@carla",
      ]
    }
  }
  ]
}
```

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All off-chain data are tagged with hashes of its schema (“typeHash”). These schemas can be publicly registered with the Lyfe Schema service so that, in combination with the Lyfe Analytics engine, developers can efficiently query auto-parsed data as long as the schema is published with the Schema service.

Published schemas can include w3c schemas such as ActivityStreams 2.0 (<https://www.w3.org/TR/activitystreams-core/>), Lyfe standardized schemas, or any Developer published schema.

The sixth service is Minting, which allows the Developer to mint LyfeGoods, custom unique in-app and cross-app items using LyfeCoin as the parent currency. These virtual assets can be accumulated inside Passport by Users. They can be traded with other Users or exchanged into LyfeCoin using the original exchange rate at the time of minting.

The seventh service is Matchmaker, which matches Users wishing to earn LyfeCoin with Applications willing to pay Users to test their applications.



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# USER INCENTIVIZATION

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As with any new disruptive technology being introduced, adoption may be slow despite concrete value the innovation brings. However, for Lyfe users, this provides a rare opportunity that encourages participants to build and share their social network with developers by compensating them fairly for their contributions, and empowering them to be a proud co-owner and contributor of the Lyfe ecosystem. This is particularly important for incentivizing the first batch of power users to create their Lyfe account and become influencers to establish the foundation and stimulate the growth of the Lyfe ecosystem.

The rewards that users receive is a direct economic incentive due to Lyfe's fluid nature as a digital currency, allowing users to not only freely trade and gift LyfeCoin with friends and family, but also be granted access to use LyfeCoin to pay for goods and services of participating applications (LyfeGoods) and be able to explore the Lyfe App Marketplace, allowing the Lyfe ecosystem to grow into maturity with mass adoption.

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Mass adoption occurs gradually over time with the users categorized into five sequential groups, or Lyfe Groups: Innovators, Early Adopters, Early Majority, Late Majority, and Laggards. Each Lyfe Group differs in size and characteristics, and will be rewarded differently when opting into the Lyfe ecosystem. More rewards are allocated to the earlier Lyfe Groups in order to incentivize users to join early and become an early part of the foundation of the LyfeChain.

## Our user incentive plan will reward users from 2 different aspects:

01

**Persona Sharing Reward:** Users are rewarded with LyfeCoins by sharing their various Personas to Developers of participating applications. The rewards will be received in a lump-sum, a continuous method, or a combination of both formats depending on the unique reward system for each participating Application. Rewards cannot be duplicated when switching Personas within the same application -- switching from sharing a Game Persona to your Photography Persona with the same application will not result in receiving twice the amount of LyfeCoin rewards.

02

**Connection Reward:** Users are rewarded with LyfeCoins for every first and second degree connection that joins the Lyfe ecosystem. This is created to incentivize users to quickly and vastly grow their Lyfe connections. The exact reward amount and time frame will differ depending on which Lyfe group the Users belong to when joining the Lyfe ecosystem.

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## **INNOVATORS**

Innovators are the first ones to adopt a new technology or creative innovation. They are typically high risk takers, curious in nature, and often has a younger average age than the other four Lyfe Groups. Innovators have a higher propensity to tolerate such risks, and they are typically opinion leaders who are very vocal with their adoption experience.

Therefore, they should be highly rewarded for taking the charge to embrace change and assist the adoption of the Lyfe ecosystem. The first 2.5% of users that sign up for their Lyfe will be considered part of the Innovator Lyfe Group and will receive a generous bonus for their Personal Sharing Reward. They will also receive a generous Connection Reward for each connection that signs up for their Lyfe account for the first 12 months after the creation of the User's personal Lyfe account.

## **EARLY ADOPTERS**

Early Adopters are the second group of individuals that adopt a new technology or creative innovation. They are typically more risk averse than the Innovators, but are still open-minded enough to try out innovations that may still be highly risky or prone to failure. They also have a younger average age than the other three groups but are more discreet than the Innovators with their actions.

The first 13.5% of users that sign up for their Lyfe account will be part of this Lyfe Group and will receive a bonus for their Personal Sharing Reward. Early Adopters will also receive a Connection Reward for friends and family who sign up.

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### **EARLY MAJORITY**

Early Majority users typically adopt a new technology or creative innovation after a certain amount of time after its first release. They've usually observed the Innovators and Early Adopters for a period of time before before deciding to embrace the change, depending on the feedback and result from the previous two Lyfe Groups. They are 34% of the population and within the minority. Thus, they will receive a smaller bonus for their Personal Sharing Reward, and also will get a smaller Connection Reward for any first or second degree sign up.

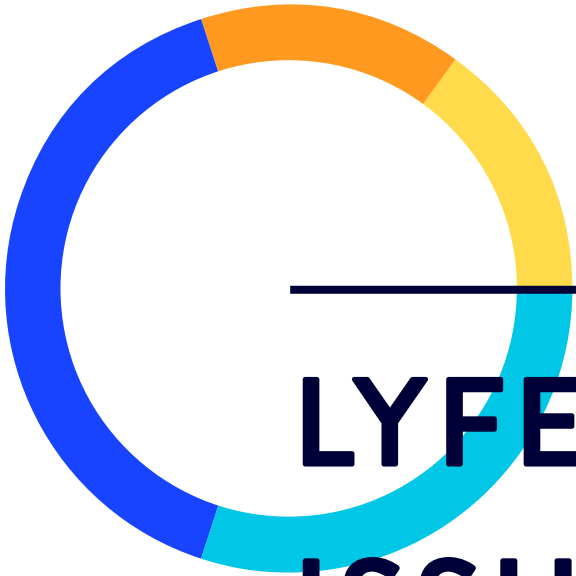
### **LATE MAJORITY**

Late Majority users are the group of users that adopt a new technology or creative innovation after the average member of the ecosystem joins. This group of users approach innovation with a certain level of skepticism and will only "give it a try" after the majority of the users have joined and determined their experience to be acceptable based on their personal expectation for safety, affordability, and expected value to be gained.

This Lyfe Group will make up 34% of the Lyfe ecosystem and will receive a very small bonus for their Persona Sharing Reward. Late majority users will not receive any Connection Rewards for any first or second degree connection sign ups.

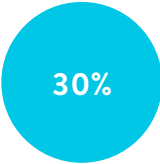
### **LAGGARDS**

Laggards are the last to adopt a new technology or creative innovation due to their highly risk averse nature and high resistance for change. They are typically older in average age compared to all other Lyfe Groups and will opt-in because "everyone else is using it." Users in this Lyfe Group make up the last 16% of the users in the Lyfe ecosystem and will only receive the Persona Sharing Reward and will not receive any Connection Reward for new first or second degree connection sign ups.

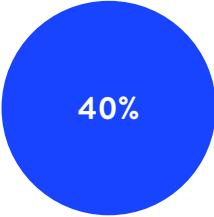


# LYFECOIN(LYFE) ISSUANCE

Total supply of Lyfe Token: 420 billion units (420,000,000,000)  
Allocation of Lyfecoin:



Token Sales



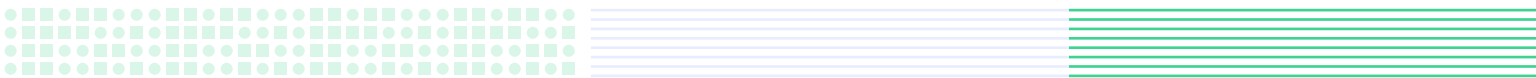
Ecosystem: users reward programs,  
developer incentive programs, partners



Team and Advisors

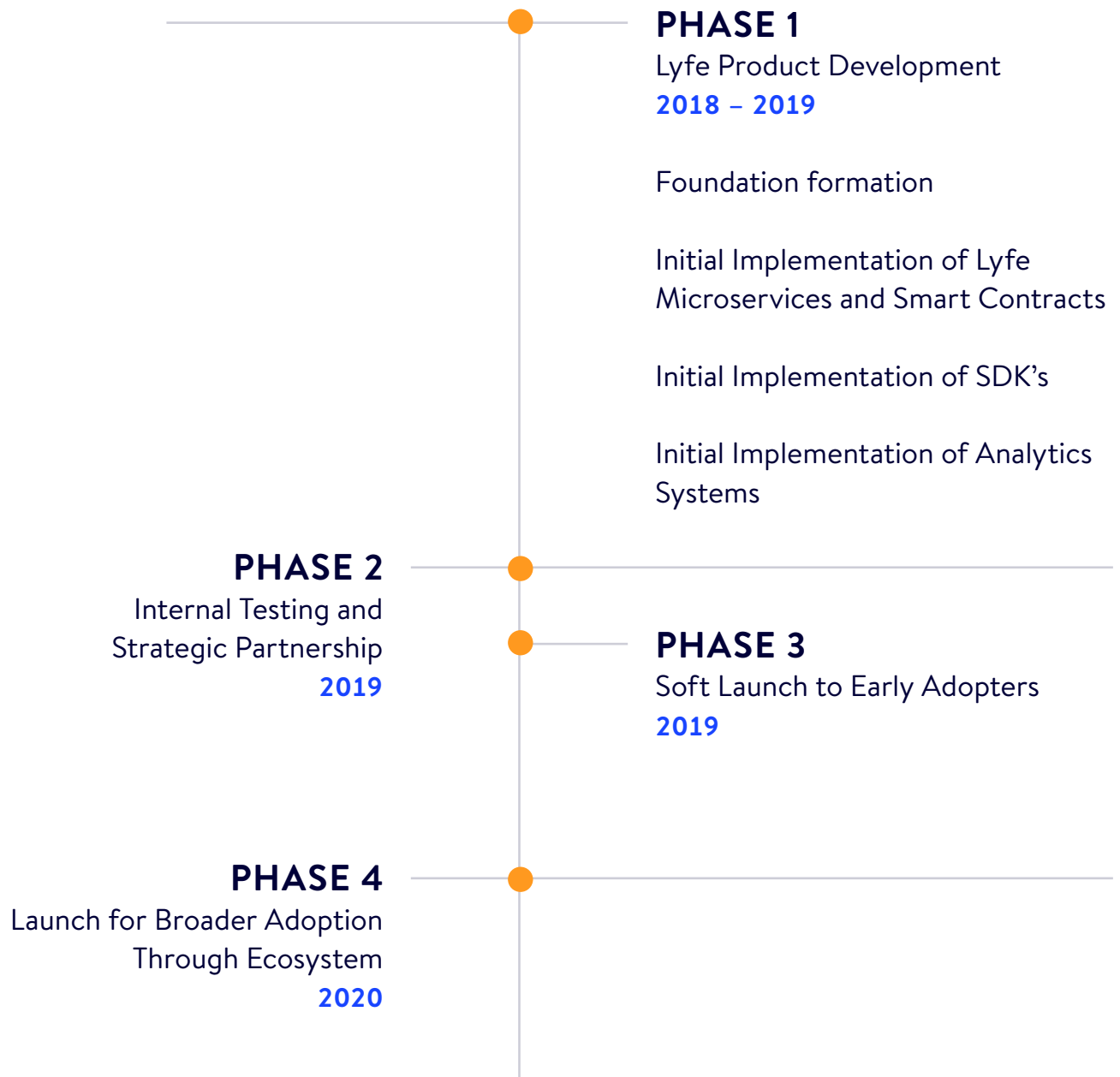


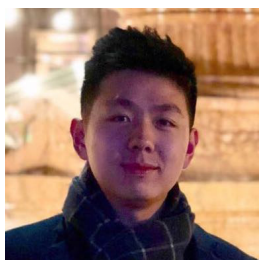
Marketing and Operations



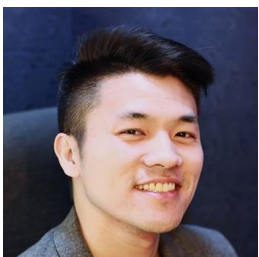
# ROADMAP

The Lyfe Foundation plans to expand the Lyfe ecosystem in multiple phases:



**ERIC TAO**

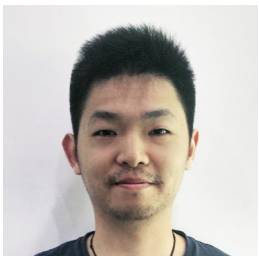
Founder and CEO at HOLLA, one of the world's most popular video chat services. Serial entrepreneur in consumer-facing social networking applications. Experienced and avid product designer, software engineer, and growth hacker. Forbes China 30 under 30 in 2017, Forbes Asia 30 under 30 in 2018.

**JEFF HSU**

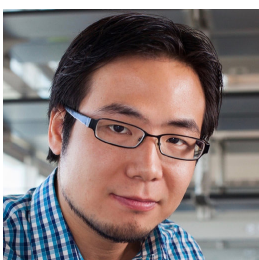
Research scientist and software architect in big data analytics and blockchain. Previously a scientist at Microsoft Research Asia, an engineer at Apple, a scientist in the AMPLab at the UC Berkeley, and CTO of Traintracks.io. Jeff holds a degree in Electrical Engineering and Computer Science from the University of California, Berkeley.

**ALLEN LOH**

Cofounder and COO of HOLLA. 10 years of experience as a serial entrepreneur. Recipient of Taiwan's "10 Outstanding Young Entrepreneurs" Award. Graduated Provost Honors with a degree in Bioengineering at UCSD, ranked #1 in the world.

**SIMON LIANG**

Simon Liang is a full-stack software engineer with expertise in distributed systems and big data analytics, previously in software engineering at Amazon.

**DR. FRED JIANG**

Professor in the Electrical Engineering and Computer Engineering Department at Columbia University and co-Chair of Smart Cities Center in the Data Science Institute. He holds a Ph.D. in Computer Science from the University of California, Berkeley.