VIOLA.AI

The First Blockchain-Powered Relationship
Registry & Love A.I.

Restoring Trust & Transparency in

the Love Industry

White Paper

CONTENTS

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KEY ESSENTIALS

Goal	- To restore trust and transparency to love and relationships
Market Size	- At least US$800 billion
Token	- Utility is achieved by transactions by users on premium features and goods and services, advertising by merchants and rewards given by or to the community
Tokens Sold	- VIOLET - ERC 20 Token - 37% of total supply, limited to a total of 250 million tokens - Tokens purchased are calculated based on the exchange rate at the point of purchase or the end of Token Sale, whichever is higher.
Cap	- Soft Cap: US$1 million Hard Cap: US$12.5 million - Public Sale targeted by latest end June 2018 - End of campaign's exchange rates determine if cap is achieved.
Team	- Over 14 years' strong track record in the industry - Team tokens vested with 30% in 1st year and 70% in 2nd year
User Base	- Starting base of 1.4+ million users to build user base and community from existing apps, platforms and services participating as Merchants/Partners from the start
Data	- Over 3500+ datasets - 1.1 billion data points for training
Product	- MVP target BETA Launch by end May 2018. - Fast Monetization with token integration and usage in our 4 dating apps, 2 websites and 4 offline services in 5 countries

ABSTRACT

Singles and couples face numerous challenges in their journey of finding love and sustaining their relationships. There is a lack of trust and transparency as singles risk being victims of love scams, fake profiles created by unethical dating services and people lying on their online dating profiles due to the lack of identity and relationship status verification. Increasing number of couples are facing difficulty in sustaining their relationships or marriages due to differing expectations, exacerbated by a lack of transparency for their marriage status.

Viola.AI is our solution for singles and couples experiencing these love and relationship challenges.

Viola.AI harnesses on the latest technology in Blockchain and Artificial Intelligence to develop the REL-Registry which is a global decentralised registry that verifies identity and relationship status. The verified users can then engage with the powerful lifelong A.I. relationship assistant equipped with useful recommendations to help create and sustain successful and happy relationships for all singles and couples.

Viola.AI is designed to help achieve the following objectives:

1) A Global and Publicly Verifiable Relationship/Marital Registry and ID System called the REL-Registry

2) Complementing the REL-Registry with the Smartest A.I. Assistant for Dating and Relationships

To achieve the objectives, Viola.AI is equipped with several core capabilities.

a) **Blockchain Technology** - Protects users through decentralised Real-ID Verification with visual recognition technology, verify relationship status with Relationship/ Marriage Smart Contracts, facilitates trustless and efficient transactions with Viola.AI Wallet and Hedged Escrow System

b) **A.I. Engine** - Provides highly personalized matching and discreet relationship advices which evolve according to the user's relationship status by employing A.I. with personalised machine learning engine and natural language empathy

We build the VIOLET token to have strong utility. Besides just the Viola.AI app, the VIOLET token will be integrated with our existing ecosystem of 4 apps, 2 websites and 4 offline services (integrated 3rd party Merchants/Partners) so that VIOLET tokens can used by its owners almost immediately and with decent scale upon its launch. The core utilities of VIOLET tokens are:

a) **Payment Transactions** – VIOLET token can be used for payment for Viola.AI premiums services, goods and services starting with the 10 existing platforms in our eco-system with plans to expand into other partners' ecosystems/platforms.

b) **Advertising to Growing User-base** - Merchants/Experts could buy VIOLET tokens to advertise the growing database, presenting another strong source of utility besides the transactional utility.

c) **Community Token** - Users can ask the community questions and reward the community for useful content, responses or ideas given by VIOLET tokens. Rewards will also be given to users for referring new users or merchants who spend on Viola.AI as a thank you for helping grow the platform.

The VIOLET token is instrumental in building up interactivity and growth traction within the Viola.AI community. Users will be encouraged to provide great content to benefit other users. The Viola.AI engine can learn from these content and the growing data will help Viola.AI become better and more accurate in its answers.

Viola.AI is driven by the team behind the Lunch Actually Group, a group of proven, passionate and dedicated entrepreneurs who are convicted to create better lifetime relationships. Together, the team has combined more than 50 years of experience in the dating and matchmaking industry. CEO Violet Lim is also an acknowledged industry expert who has been featured in more than 4000 local and regional media appearances including Bloomberg, Huffington Post, CNBC, Forbes, BBC, Channel NewsAsia and many others.

We believe Viola.AI will revolutionize and disrupt the world's dating and relationship industry by restoring trust and transparency and resolving the pain points and challenges that singles and couples are facing today.

1. BACKGROUND

1.1 LOVE & RELATIONSHIPS CHALLENGES IN THE 21ST CENTURY

Everyone has a universal desire to seek companionship and love. However, despite all the advancement in technology, the quality of dating and relationships has declined over the recent decades to record lows.

Finding Love	Managing Love
Lack of Trust	Different Expectations Leading to High Divorce Rates
Lack of Right Mindset & Skillset	Lack of Verification and Transparency for Relationship/ Marital Status
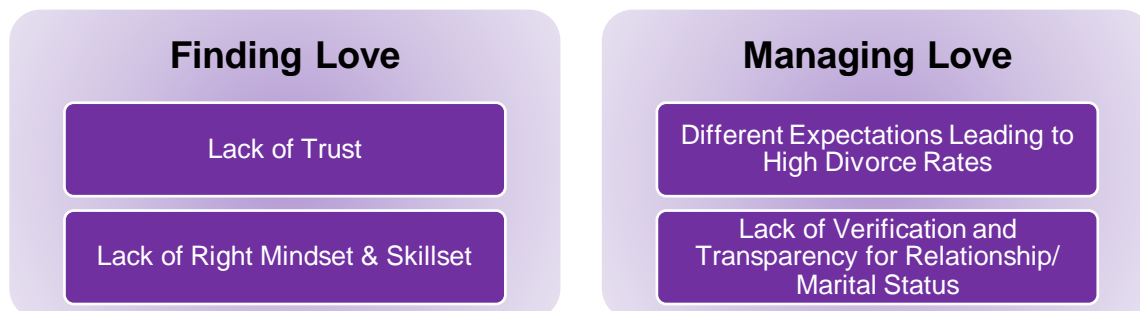
1.1.1 Finding Love

Lack of Trust

There is a lack of trust in online dating due to increasing love scams, use of bots by dating companies and people lying on their online dating profiles with attached or married individuals lying about their relationship status or profile details.

Love scams accounts for the highest financial losses of all internet-facilitated crimes in the US, as reported by the FBI. There were 15,000 love scam complaints received in 2017. While the reported losses were over US$210 million, the FBI estimated that it was only attributed by 15% of the total number of love scams. This translated to a billion-dollar loss to the victimised singles in the US, not including the losses from the rest of the world.

Aggravating the lack of trust in online dating, some dating companies are reported using chatbots to lure users to subscribe for their services. Companies such as Ashley Madison, JDI Dating and DEAiBBS were reported to have fabricated profiles to help extend their customer lifetime value and to increase their revenues. A hacker group revealed that out of the 5.5 million female profiles on Ashley Madison's site, only as low as 12,000 profiles were real women.

With more people lying in their online dating profiles, it has become harder for singles to trust the people they know on the dating platforms. A research of more than 1000 online daters in the US and UK found that 53% of the US participants and 44% of the UK participants lie in their online profiles. While men lie most about their occupation, women tend to lie most about their age. Interestingly, the top common lies for both men and women are about their appearances. A survey conducted by MSNBC states that 30% of men using an online dating service are married while another survey by GWI claims that 30% of Tinder users were married.

While online dating has provided singles another way to meet new people, it is evident that a new system is needed to build the trust among singles towards online dating and to protect singles from falling prey.

Lack of Right Mindset & Skillset

While unsafe dating environment hinders singles from finding love, the lack of right mindset and skillset in dating will also affect singles from succeeding in finding the suitable match. Some singles do not possess the right mindset (e.g. they are overtly negative, have emotional baggage) and some do not have the right skillset (e.g. what to do on a date, how to advance from dates to a relationship). Before knowing how to look for their ideal match, singles need to know what a compatible match is and how to be the right match. Having the right mindset and skillset help singles to become a better person with reasonable expectations in finding love.

1.1.2   Managing Love

Different Expectations in Relationships Resulting in Rising Divorce Rates

Conflicts are common in relationships and they are a result of differing expectations between the two persons in each relationship on how matters should be handled. As the expectations are never clearly communicated to one another in a relationship in words, couples often find out about their partner's expectation only when disagreements arise. Expectations can differ widely on several areas, such as finance, parenting, values, communication style, behaviours and habits. Diverging views on financial management is the key cause of unhappiness in a relationship. A study in the US highlighted that money was the top cause of tension in marriages while another study found 75% of couples (including unmarried couples) indicated that it is important to find a partner with similar approach towards financial management. Tension in relationship could also appear and poses challenges in a relationship when unexpected life events and economic situations happen and impact the couple.

With increasing tension in a relationship, couples risk facing relationship dissolution and marriage breakdown. In the United States and Europe, the divorce rates range from 53% to as high as 70%. Even in conservative Japan, divorce rates have jumped 4 times in the last 30 years with 1 in 3 marriages ending in failure.

As married and unmarried couples experience unhappiness when expectations are misaligned and further impacted with events arise beyond the interpersonal issues, it is all the more important for couples to possess the best advices to manage the situations, to reduce tensions and to strengthen relationships as they overcome crises together.

Lack of Verification and Transparency for Relationship/Marital Status

Lack of transparency in relationships and marriages attributed by the absence of worldwide registry of relationship and marriage status is a very important challenge that is often neglected.

This has led to people having multiple relationships and marriages in different countries while their partners are kept in the dark or forced to accept the truth when the pain to leave the relationship or marriage weighs over the misery to stay.

There is no worldwide registry of relationship and marriage status that is accessible for everyone, save for social media such as Facebook which allows limited glimpse of a person's relationship or marriage status. Marriage records are localised and stored in the registry in each country. They are not shared across the world and do not allow easy accessibility for everyone. On the other hand, it is even more difficult to verify that a person is not having multiple relationships at the same time.

1.2 BIG SPENDING ON DATING AND RELATIONSHIPS

1.2.1 Preparation for Dates

In dating, first impression counts. It is no surprise that singles invest in that impressive outfit or new hairdo to look their best as singles who are better-groomed are more likely to succeed in the dating and courtship phase.

1.2.2 Dating Activities

Dating activities can be free like spending a day in the park or paid for like catching a movie together, enjoying a premium meal in a Michelin star restaurant or for couples, going for an exotic holiday.

1.2.3 Gifts

Buying gifts is common among singles and for attached couples looking to surprise each other on special occasions. Americans are estimated to spend around $19 billion on Valentine's Day just on buying gifts. In recent years, "Singles Day" (11th Nov) has become the world's biggest online shopping day where shoppers spent US$25.4 billion in just 24 hours. Other special days include anniversaries, birthdays and Christmas.

1.2.4 Dating Services

The dating industry has risen from its infancy stage to now cover online dating sites, dating apps, singles event organizers and matchmaking services. The choices of dating services available for the singles strongly indicate that there is growing demand around the world.

1.2.5 Proposals and Weddings

Proposals, registration, wedding planning and the actual wedding itself are estimated to be a US$300 billion market worldwide as couples are prepared to splurge on the celebration of their union.

1.2.6 Education/Counselling

Education and counselling services have grown aggressively over the past decades ranging from "pick up artist" classes for single men, date coaching, books, videos and counselling services that attempt to mend relationships or salvage marriages that have gone wrong.

1.2.7 Global Addressable Market Size

The dating, courtship and relationship related spending market is estimated to be at least $800 billion.

Dating Services + Education Services + Gifts + Dating & Romance Related Expenses = US$800 billion

2. WHAT IS THE VIOLA.AI

2.1 INTRODUCING THE VIOLA.AI

To address the challenges illustrated in the earlier chapter, we are bringing together the latest advances in Blockchain and Artificial Intelligence to create a powerful solution for singles, dating and married couples. The solution will be:

- A decentralised relationship registry (named the REL-Registry) to verify the true identity and register relationship/marital status for all users and couples
- A.I.-powered recommendations on the chat platform; besides helping individuals or couples register on the network, it would also value-add by giving personalised advice and recommendations to the user
- Powered by trustless Smart Contracts that create open and immutable records of relationship status, events or agreements to help structure and govern relationships as well as the reward distribution between users and 3rd parties.

Our Solution – Viola.AI

REL-Registry
- Real Photo-Video Confirmation
- Social Media Check
- Relationship Status
- Hashed on Blockchain

AI Chat & Recommendations
- Subject Matter Expert for Love
- 3rd Party Providers
- Distribution of Rewards
- VIOLET Token Wallet

Open Integration
- Secure Solutions for all Platforms and Industries
- VIOLET token at the heart of this ecosystem

REL-REGISTRY

A.I. Chat & Recommendations

Open Integration

2.2 CORE OBJECTIVES

2.2.1 REL-Registry - Global and Transparent Relationship/ Marital Registry on the Blockchain

The core of the Viola.AI is the REL-Registry which aims to be the trusted global relationship registry that is decentralised, immutable, open and accessible for all. REL-Registry verifies whether a user is a real person, records publicly verifiable relationship status and creates agreements on the Blockchain. Singles can be assured that they are communicating with real person instead of a bot or a scammer. On the other hand, married or unmarried couples can be assured of their partner's relationship status given the transparency of the public record and declare their love commitment to one another on the Blockchain.

Information will be published to the Blockchain with a standard Smart Contract and users have the choice the create customised Smart Contracts with personalised agreements and events. For example, a divorce Smart Contract can be added by clarifying what would happen should the event occur. This provides clarity and structure to relationships that are not yet in the status of marriage (eg. cohabiting couples, engaged couples) via the Smart Contracts.

2.2.2 A.I. Chat & Recommendations – Provide Relevant and Direct Value to Users

Viola.AI introduces A.I. chat and recommendation to bring direct and relevant value to users after they have registered on the global REL-Registry with the ever-improving, decentralized and secured A.I. engine that gives sound advice, useful recommendations, timely concierge service and quality matches to help singles to be effective in finding love and to help married and unmarried couples improve their relationships.

Viola.AI provides an opportunity for Dating (for Singles) and Relationships (for Couples) industries to come together for greater effectiveness by combining both sets of data and increasing customers' life-time value (CLTV) simultaneously. The Dating and Relationships industries have long operated separately. The information accumulated in the dating and courtship journey of a person's life would be useful for the later stages of couple-hood and marriage. Throughout a person's dating and relationship journey, Viola.AI will recommend highly targeted and relevant content, goods and service from the better rated experts/merchants to users according to their personalised needs, relationship timelines (birthdays, anniversaries, special dates), relationship stage (e.g. no wedding rings ads for singles who have not found the right one yet) and other customisable factors. Experts and merchants would thus enjoy higher sales conversion rates due to the timing and relevance of these recommendations. Using Ethereum Smart Contracts, all parties will be assured that any community and partner's effort to improve Viola.AI will get their agreed due rewards or revenue share respectively.

2.3 CORE CAPABILITIES
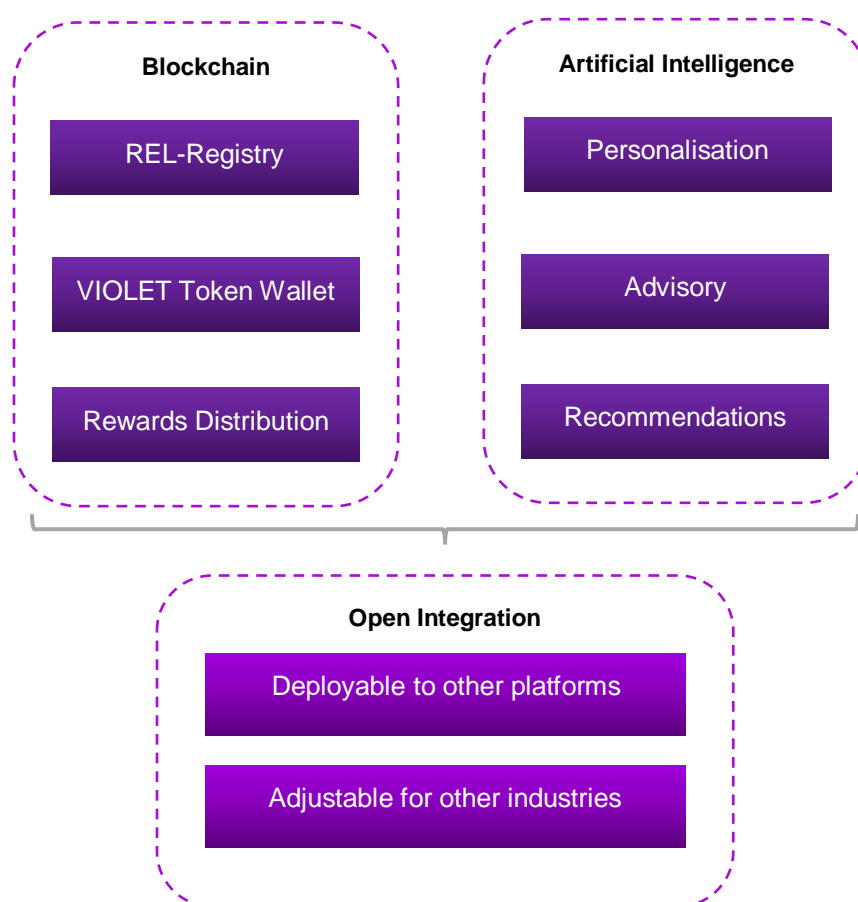
2.3.1 Blockchain

A. REL-Registry – Decentralised Identity Verification Protection for Everyone

One of the key usages of Blockchain technology is in our REL-Registry system. This helps to create trust and transparency for legitimate singles who are serious in finding love and partners in a relationship. Many time, we do not know if a person on the web is a really who they are which in the realm of dating leads to possible exploitation by love scammers or companies using bots to extend their limited CLTV (Customer Lifetime Value). A person who is attached or married could also lead a person who is single on onto a fruitless relationship or, worse, commit bigamy with them due to the lack of a global registry for relationship/marital status.

The advantages for all users verified by REL-Registry are:

- It ensures the profile that a user sees represents a real person and not a bot made to bait the user into signing a subscription plan.
- Better clarity for all parties and lesser disappointments on physical appearance in first face-to-face dates due to greater authenticity of photos used (i.e. what you see on photo more closely resembles what you see in person).
- Relationship declaration creates a transparent registry for relationships and marital status which creates more trust, clarity and transparency for all parties involved.

- Minimise dispute between married and unmarried couples on expectations of one another, agreements on how matters should be handled and the dates of special occasions by creating personalised Marriage or Relationship Smart Contracts on the Blockchain.

- All information will be fully encrypted personal data verification proof and optional biometric locks and will be securely stored in the user's phone. By keeping this data in the user's control instead of a centralized services or database, it will prevent the vulnerability to data breaches and may even lead to denial of service where the service is compromised.

Use Case

James downloads the Viola.AI App and creates an account. He uploads a photo that has half his face blocked and Viola.AI then takes a video scan of his face for the verification process. The verification fails as the photo James has used is not suitable (or even good for a dating profile) when compared to the video scan. He is then prompted to use another photo which she uploads to Viola.AI again. This time, the photo used is more suitable and the verification test passes. James logs in to his Facebook account to allow verification to be conducted on his profile which includes name and other basic information and she puts down his relationship status as single. The final checks are passed and James can proceed to use his verified profile on Viola.AI.

B. REL-Registry - Open, Global and Immutable Love Declaration on the Blockchain

There are many advantages by recording relationship and marital status on the REL-Registry:

- A person's marital status should be a public and available fact. Putting the status on the Blockchain accessible to all can provide ease of mind that their mate relationships status is clear and transparent for all

- An opportunity for one or both sides to prove sincerity and love for the other party, having more structure in the relationship etc.

- There is no need for documents or certificate to prove you are married to any Organisation or application process

- Many governments would love a decentralized Registry of Marriage and some may even encourage or cooperate with REL-Registry due to its the transparency and immutable nature (e.g. the ROM in SG allows limited searches but the problem only for the marriage found in SG) and the problems it helps solve for them

- Couples who are unable to marry in their country or state could now possibly marry on the Blockchain and use the Smart Contracts as the structure and rules for their union.

- Other platforms (other dating sites, relationship centric portals etc) can use the REL-Registry as a registration, login or verification system to value add to their platform as well via API

Use Case: For Singles Getting into a Relationship

James is single and he uses Viola.AI to help him get a date. He downloads Viola.AI, uploads his photo and verifies it along with his social media account. He registers his status as single. All his potential matches that are recommended by Viola.AI also go through the same process, and their identity and status have been verified. Viola.AI recommends James suitable matches and helps him arrange dates.

When James meets Sarah from his workplace, he can check Sarah's relationship status within Viola.AI's Relationships Registry with VIOLET tokens, as REL-Registry is global. Viola.AI assures James that Sarah is not married.

James and Sarah are now exclusively dating, and they wish to register their status as "In a relationship" in Viola.AI to show their love and commitment towards one another. Viola.AI will be their Love Advisor to help them keep their relationship strong and happy, from giving them unique date recommendations, reminding them of important dates and anniversaries, and referring them to relevant products and services that they need.

Use Case: For Couples Getting Married

Meet James and Sarah. The couple have been together for 3 years and they wish to get married onto the blockchain via Viola.AI. Sarah downloads the app, uploads her photo and verifies it along with her social media account. James does the same.

Sarah tells Viola.AI that she wants to register a new marriage with James. Viola.AI arranges the date and reminds the couple a day before this important milestone. On the day, Viola.AI acts as a solemnizer and witness and the couple says, "I do." They are officially married, and their status is hashed onto the blockchain. They also add some fun conditions to their marriage, such as having a date night once every week and visiting each other's in-laws once every month. James and Sarah have declared their love and commitment to one another and added structure to their marriage through the smart contract.

Viola.AI issues a marriage certificate which includes their vows and date of marriage, which is immutable and accessible to them and to selected circle of family and friends that they authorize. From then on, Viola.AI will be their Love Advisor to help them improve their marriage, from giving them unique date recommendations, referring them to relevant products and services that they need, and helping them with any challenges in their marriage.

Use Case: For Married Couples

Meet Henry and Elizabeth. The couple has been married for 8 years and to celebrate their anniversary, Henry wishes to register their marriage onto the blockchain via Viola.AI as a gift to show his love to Elizabeth. Henry downloads the app, uploads his photo and verifies it along with his social media account.

He puts his marital status as married and Viola.AI prompts him to register his partner as well. Elizabeth goes through the same verification process and put her marital status as married to Henry. They both confirm the status, which then links their account together as a married couple. They also add some fun conditions to their marriage, such as having a date night once every week without the children and visiting each other's in-laws once every month.

Their status is then hashed onto the blockchain. Henry and Elizabeth have declared their love and commitment to one another and added structure to their marriage through the smart contract, which can be customized using VIOLET tokens.

Viola.AI issues a marriage certificate which includes their vows and date of marriage, which is immutable and can be used as valid documentation of their marriage when they relocate to another country. Viola.AI is also their Love Advisor to keep their marriage strong by recommending new activities, suggesting meaningful gifts by relevant merchants, and helping them resolve any challenges in their family.

C. REL-Registry - Open, Global and Immutable Love Agreement on the Blockchain

REL-Registry not only allow couples to publish their status but also their vows, rules and expectations onto the Blockchain as a guiding basis for the relationship. This can be done for any stage of the relationship from just getting together to couples who are cohabitating to married couples as well. This could be useful especially for couples that do not want to get married yet (eg. cohabitating couples) but who still want some structure in their relationship.

The advantages are:
- Stating down the expectations for the relationship from the early start in a public record
- Buying any relevant Smart Contract that to enforce rules and outcomes in their relationships, especially in circumstances of break up or loss of one party.
- Transparency of expectations and rules governing different outcomes in the relationship.

D. REL-Registry - Process

The verification process will confirm that the uploaded photo in the profile matches the real person and verifies the basic details via social media check. The relationship status is then linked to this account and should the users desire, they can commit their relationship/marital status to the Blockchain as part of the REL-Registry.

All the verification and relationship status statement come together to provide a decentralized identity solution on the Blockchain for singles and couples. With the REL-Registry, all relevant parties can cryptographically linked to their verified offline-online identity and relationship status. Not only does this allow users to truly own an online identity rather than a corporation, this will lead to more confidence and trust with the communities and 3rd parties.

As our users are expected to share their lifetime personal and sensitive dating and relationship data on Viola.AI, it is critical to secure this data with our decentralised REL-Registry system and end-to-end encryption. This ensures no Viola.AI user should ever wake up one day to find all their personal information and communications being leaked to the world, like in the infamous Ashley Madison hacking case.

Below are the steps for the overall REL-Registry verification process:

Step 1
- User uploads profile picture of his face

Step 2
- Viola.AI requests user to real-time video scan his face with the app

Step 3
- Viola.AI scans, matches and verifies with facial recognition.
- If unsuccessful, user must upload better and recent photo
- A check on user's social media is also done

Step 4
- User declares their marital status
- If single, proceed to the next step
- If married or attached, they need to set up/verify their partners account and link both accounts

Step 5
- Upon successful verification, data is encrypted using private/public key and saved on phone

Step 6
- Viola.AI takes extra security measure to obfuscate the data

Step 7
- Viola.AI writes the hashed, signed data onto Blockchain

Step 8
- User data becomes unreadable to anyone without authorization

Step 9
- Update REL-Registry verification process for every change of profile picture or change of relationship status

Below illustrates how REL-Registry works

**How to Register Your Marriage on Blockchain**
Step 1 – Select on Viola.AI to register marriage on the blockchain
Step 2 - Enter marriage date and venue of the marriage, with your marriage vows and wedding photos (if any)
Step 3 - Viola.AI sends the marriage invitation to your partner for his/her confirmation
Step 4 - Once confirmed, Viola.AI will link both your accounts as married couple
Step 5 - Viola.AI writes the hashed, signed data of marriage verification onto blockchain, and issues a marriage certificate
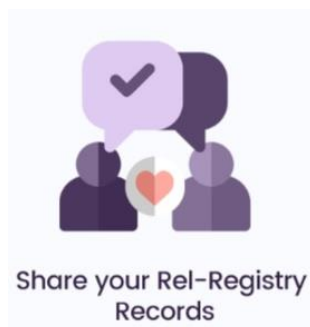
How to View and Share Your Marriage Certificate
Step 1 - Ask Viola.AI to show your own marriage certificate
Step 2 - Viola.AI displays your marriage certificate
Step 3 - Start sharing your own marriage certificate with your loved ones

How to Search Other User's Marital Status
Step 1 - Ask Viola.AI to check a user's status (with full name) within REL-Registry
Step 2 - Viola.AI searches in REL-Registry and informs you if a marriage record is found
Step 3 - Authorized user can view the marriage certificate, including marriage date, location and vows. Unauthorized user can only see whether a record is found, but unable to view the marriage certificate

E. *Viola.AI Wallet*

Viola.AI Wallet is key to facilitate all transactions in Viola.AI between users and experts/ merchants. The Viola.AI Wallet provides great convenience and security for users by allowing users to:

- Purchase and store VIOLET tokens
- Make or receive payments for goods and services
- Pay for REL-Registry premium Smart Contracts services
- Conduct peer-to-peer token transfers when users reward one another for quality content or advices
- Receive rewards for revenue share, gamification, referral and system bug report

F. *Rewards Distribution*

Viola.AI's business model will be largely decentralised with Ethereum Smart Contracts and Hedged Escrow System to automate the distribution of tips, rewards or payment in trustless manner. This system allows users to secure the total value of a service in the escrow contract and only release it when the service is completed. As VIOLET token value may fluctuate during the escrow holding period, any differences in the escrow value are adjusted with the hedged contract upon release of the payment.

The distribution of tips, rewards or payment is conducted largely by the Smart Contracts between buyer, seller, content contributor, referrer, the rewards pool and the project reserve in the right proportions detailed in Chapter 3.1.3 of this document.

2.3.2 Artificial Intelligence

Viola.AI aims to create happy relationships and marriages with the use of A.I. to value-add and maximise the Life Time Value of the users in the REL-Registry.

A. *Personalisation*

Currently, the common problem of the dating or relationship applications in the market focus on a simple one-dimensional part of the dating or relationship stage. If it is a dating bot, it solely focuses on matches and dates whereas all the data and information gathered when the user gets into a relationship are wasted, upon which the dating bot becomes useless.

Viola.AI helps users to create and manage relationships with personalised matches and advices in every stage - dating, courtship, exclusivity and marriage. When a user finds someone, and is now exclusively dating him/her, Viola.AI will simply evolve to courtship-centric advice and recommendations, focus on date arrangements; all relevant to an exclusive relationship. Viola.AI can even serve the user in the case of a break-up and ease the person back into dating when he/she is ready.

Furthermore, Viola.AI does not judge and it matches users based on their intentions. If a user's current preference is to make friends or focus on casual dating, Viola.AI will provide the right matches based on mutual intentions. Similarly, users who are looking for serious relationship will be matched with people of similar intentions.

With Viola.AI being able to serve users throughout all stages of relationship, this helps address the conflict of interest that dating services face where the more effective they are, the earlier they lose their best-paying users. Thus, Viola.AI will always service its users to the best of her ability.

Viola.AI provide value to users in 3 core ways:

1. Reduces workload for users by providing personalized matching, relationship advices, dates coordination, purchase of goods and services, date and romance ideas and content
2. Provide timely, scheduled and on-request advices and actions based on relationship status and needs
3. Provide discreet and non-judgmental connection for users

Below is a sample of Viola.AI's capabilities which is not exhaustive:

Dating	Courtship	Marriage
1. Right matches based on intention (e.g. Casual/Serious)	1. Capture details on partner to customise do and don'ts	1. Pre-marriage preparation and counselling
2. Arrange dates	2. Advise on managing personal differences	2. Provide honeymoon ideas that fit budget
3. Recommend gifts for dates	3. Curating suitable and fun activities for couples	3. Reminders to maintain 4:1 positive to negative experiences
4. Reminders on dates and dating etiquette	4. Perform relationship health check and provide improvement suggestions	4. Curating suitable date ideas for couple based on lifestyle data
5. Record date and outcome	5. Breakup grieving support	5. Reminders for anniversaries and special dates
6. Propose strategy for texting and following up	6. Transit to finding better match with refined preference and experience	6. Marriage counselling
7. Give advice based on real data	7. Advise on managing expectation of families	7. Divorce advice and management
8. Collect feedback from the other party	8. Provide ideas for proposal	8. Family planning
9. Evolve from dating to exclusivity	9. Provide ideas for wedding planning	9. Pregnancy and parenting guide
10. Help a divorcee ease back to modern day dating	10. Keep track of wedding plan progress and activities	10. Community and expert support for new parents

Use Case

Henry is using Viola.AI to find new matches. Finally, Viola.AI informs Henry that one of his matches, Elizabeth, is also interested in meeting up with him. She proposes to arrange the date on Wednesday (after checking both side's calendars) in a Japanese restaurant (both parties like Japanese food) that is relatively near (based on where Henry and Elizabeth work). Henry agrees to the date, time and venue. Shortly after, he receives a notification that Elizabeth has also agreed. One day before the date, Henry receives a reminder on the date and Viola.AI suggests a first date article for Henry to read. On the day itself, Viola.AI prompts Henry to leave work on time and shows him the location of the restaurant again to avoid being late (first impression counts). Henry finally meets Elizabeth face to face. They both hit it off which Viola.AI promptly asked Henry for feedback on how the date went after the date. After a few more dates proposed and arranged by Viola.AI, Henry and Elizabeth decide to become an exclusive couple. Henry updates Viola.AI on this change in his relationship with Elizabeth and Viola.AI now switches mode from matchmaker to love advisor and begins to help Henry to grow his relationship with Elizabeth henceforth (e.g. reminding him of important dates and prompting him to gift). All this time, Elizabeth goes through the same process as Henry.

B. Crowd Wisdom and Advisory

Viola.AI is designed for all users to always get free advice from Viola.AI on an individual and discreet manner so that they are less reluctant to ask questions. However, as Viola.AI is still in the early days of development, it will take time for Viola.AI to learn and to give the most relevant advice. The topics of love, dating and relationship are very broad with many possible complex scenarios and permutations.

Viola.AI aims to provide the best advice to users' unique questions with a platform for all users to share their advices to address the questions. While Viola.AI is developing and improving its initial limited advisory capability, users can seek answers by sending out their questions or requests to other users in the platform via a bid. The requestor can encourage respondents to answer the request by adding VIOLET tokens to the request as a reward. The respondent with the best answer that is chosen by the requestor will be given VIOLET tokens. The requestor can decide to reveal their identity or remain anonymous if they desire the privacy. Most importantly, Viola.AI will learn from the best-rated responses and if she incorporates the responses into her future responses, the content providers will also be rewarded with VIOLET tokens.

Viola.AI triumphs over forum in providing advices to users. Posting in a forum and asking for replies/advice is a hit-and-miss affair, depending on who happens to be online when the question is asked. Viola.AI can retrieve the best answers from previous contributors and ensures that requestors do not miss out on the past best responses. Meanwhile, Viola.AI continue to reward these contributors if their previous responses are relevant in helping the requestor solve their problems.

The diagram below illustrates how a request to the community is done:

Step 1
- User posts a question with 3 VIOLET tokens as reward (or can be free too)
- User can post anonymously or open about his/her identity

Step 2
- Post is announced to all other users and experts/ merchants (the Community)

Step 3
- The Community replies to the question
- Viola.AI responds too & curates the top 3 most relevant previous replies

Step 4
- User screens through all answers

Step 5
- User chooses the best answer (s) and gives 3 VIOLET tokens to the respondent(s)

Step 6
- All respondents can see the responses and give ratings and token tip
- If the responses from previous contributors are rated well by requesters, Viola.AI will notify and reward the contributors with VIOLET tokens

Use Case

Viola.AI has helped Henry and Elizabeth nurture their exclusive relationship. Henry decides to propose to Elizabeth. He wants the proposal to be special and unique and decides to ask the community for advice and

ideas. He sets up a request, adds 10 VIOLET tokens as a reward and sends it out. Dozens of replies start coming in from the community proposing ideas and sharing stories of their own proposals. Merchants respond with offers of their services and venues for his proposal. Henry goes through the answers. He selects the reply he deems to be the best and the 10 VIOLET tokens go to the person providing that reply. Henry also selects a venue to rent from one of the merchants and pays a deposit to that merchant through Viola.AI to secure it for the special day. The proposal is successful and Viola.AI proceeds to help the couple plan the wedding.

C. *Recommendations*

The A.I. Advisor and 3rd parties provide content, goods and service on Viola.AI which is presented by a recommendation engine. It serves as an intermediary between the user community and experts/merchants/partners centred on the VIOLET token. The advantage of receiving recommendations from Viola.AI are:

- Timeliness – Viola.AI recommends content and services to users based their moment of needs and occasions. This not only satisfy the users, this also brings the quality of the leads to the expert and the merchant higher than that of a person who is simply browsing around or doing "window" shopping with no specific aim.

- Convenience – Viola.AI serves as an enabler for both sides for the transaction to happen, reducing friction and misunderstandings that very often happen between users and experts/ merchants.

- Relevance – The right type of content, goods and services from the right experts/merchants are provided to the right type of users based on the person's relationship stage and both side's personal preferences. Thus, there is greater relevance to all parties in the platform.

Payment for the recommendations can be made with VIOLET token as Viola.AI has a wallet for users to hold and manage their VIOLET tokens. For initial practicality, payment can also be made with credit cards for now. We would, however, give extra incentives for people to use VIOLET token for transactions ensure it gradually preferred over fiat.

Interaction for Users & Experts / Merchants

- Advice for User's Queries
- Purchase of Goods & Services
- 1-to-1 Direct Chat
- Mutual Reviews
- Tips with VIOLET Token for Good Content & Service
- Revenue Rebate for Vendors with Good Reviews

Use Case

It is now one year since Henry and Elizabeth got married. Viola.AI reminds Henry that his first wedding anniversary is coming and if he wants to do anything special for Elizabeth. Henry responds "Yes" and he wants to buy flowers and book a restaurant for a nice dinner date. Viola.AI proposes the itinerary for the evening which Henry accepts. Viola.AI then proceeds to make the booking. Viola.AI presents Henry with 3 choices of the flower bouquet for Elizabeth and proposes the time and place of delivery. Henry doesn't like any of the choices and sends out request to the florist merchants within Viola.AI for more options. More flower options come back from the florist merchants and Henry chooses one of them to be delivered at the time and place proposed by Viola.AI and makes payment by VIOLET tokens to the chosen florist merchant for it. Henry is now all set for his Anniversary with Elizabeth and Viola.AI reminds him accordingly one day before about it.

2.4 OPEN INTEGRATION
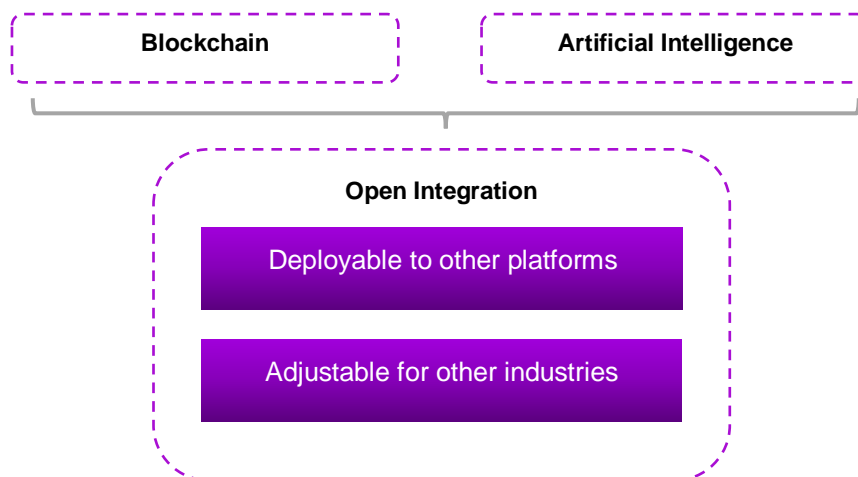
Viola.AI will be open-source with codes shown and development coordinated on Github. We believe this gives the most potential for the development of the project and an effective way of promoting the rewards pool beyond marketing. This gives the potential for Viola.AI to be deployed to other platforms as well as other industries who are looking at the same framework or model that the protocol is based on.

2.4.1   Deployable to Other Platforms

Viola.AI will be deployed in all of Lunch Actually Group's eco-system of platforms which will be onboard Viola.AI as the first 3rd party platforms from the start but will be treated as separate entities in their recommendations and ratings.
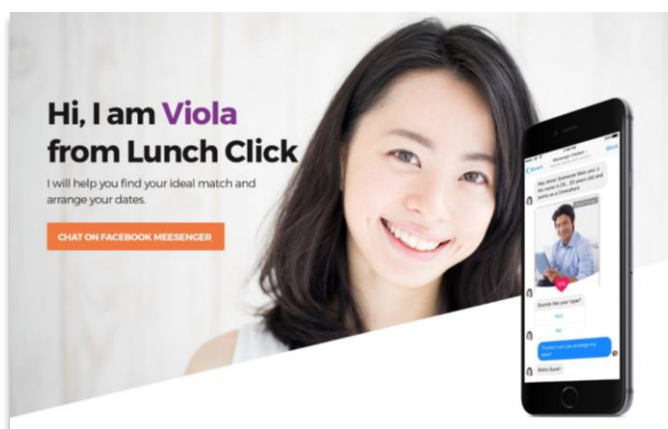
Beyond Lunch Actually Group's platforms, other 3rd party partners may also deploy Viola.AI with the benefits:

- Firstly, Viola.AI can be customized based on their platforms to serve their sales needs by legitimately promoting their subscription packages and services.
- Secondly, Viola.AI changes the paradigm for the dating industry with continued residual income and longer lifetime value for their customers. Viola.AI will use Smart Contracts to enable revenue share so that a partner's users will give them residual income as they move through different stages in a relationship.
- Thirdly, Viola.AI platform allows partners to further pro-actively engage their users as well as Viola.AI's other users, thus increase their credibility and marketing reach. Viola.AI reward system enables them to earn VIOLET tokens from the users whom they can further advertise their businesses to.

2.4.2 Deployable to Other Industries

Viola.AI's Protocol of "Verify-Chat-Recommend" can be replicated for other applicable industries (parenting, career, banking and financial planning for individual and family, etc) as the project is open source with the only exception that VIOLET token is the currency that must be used.

This gives the potential of expanding the usage of VIOLET tokens beyond just the dating industry expanding the token's utility further and leveraging off other efforts and industries.

2.5 TECHNOLOGY

2.5.1 Artificial Intelligence (A.I.) with Decentralized and Personalized Machine Learning Engines

Majority of today's big institutions that employ machine and deep learning have centralized infrastructure that own and control user's data. With recent advancement in Blockchain and A.I technology, it is now possible to keep sensitive user's data safe and private while improving the A.I. learning models for everyone. Hence, we will develop Viola.AI to have a decentralized A.I. engine for relationships and dating.

The Viola.AI engine will be initially deployed with our proven models based on more than 14 years of experience in dating consultation, concierge and coaching. We are also looking to work with Singapore Government Agency, A.I. Singapore, who has the capacity to support us with more A.I. expertise and research resources. Over the same period, we have also accumulated 1.1 billion data points segmented in nearly 4000 datasets from not just on what singles do online, but also on what really happens offline in real dates which will provide a strong foundation in our initial A.I. training data and development.

This application of decentralized machine learning will have 3 major benefits:
- User's sensitive data are kept private and safely encrypted in local devices
- Trained A.I. model will be highly personalized for each user
- Allows collaborative learning that has positive network effect for users
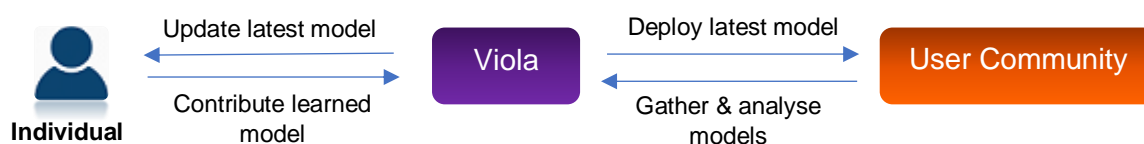
With this model, Viola.AI will be able to harness the best practices of the crowd-sourcing while maintaining the personalization of everyone as we understand there is no one-size fits all solution for any relationship challenges.

2.5.2 Deeper Understanding of Users and Partners

As we focus on more in-depth understanding of the user via interaction with Viola.AI and big data, we will able to provide more accurate profiling and timely advice and recommendations. This area will also tap into the user's social media and online data for further analysis.

Each person has their own set of values, beliefs and perspectives. These different degrees of characteristics place a huge influence in searching for compatible matches and are crucial for relationship success. By understanding user and their match/partner/spouse's personality dimensions, Viola.AI will be able to effectively advise them on how best to communicate, actions to take and things to avoid which can be successfully accumulated in Viola.AI for useful application for a person's lifetime relationship.

To obtain accurate personality dimensions, the following methods and approaches will be proposed:

Step 1 - Data Sets Preparation

User's data obtained should be transformed first into optimal format prior to machine learning analysis. Two major areas will be discussed here to achieve this.

a) Dimensionality reduction

By using singular-value decomposition (SVD) and orthogonal rotations (Varimax). These methods will reduce the risk of overfitting and increase statistical power of results. Also, they will remove multicollinearity and redundancy in data corpus by grouping related features (variables) in single dimension. As a result, the significantly reduced data sets will impose lower demands on computational resources and more useful for manual analysis to extract specific patterns for further research and refinement.

SVD Theorem:

$M = U \, \Sigma \, V^*$

- U is an $m \times m$ unitary matrix (if $K = R$, unitary matrices are orthogonal matrices),
- Σ is a diagonal $m \times n$ matrix with non-negative real numbers on the diagonal,
- V is an $n \times n$ unitary matrix over K, and
- V^* is the conjugate transpose of V.

Varimax Theorem:

$$R_{\mathrm{VARIMAX}} = \arg\max_R \left(\frac{1}{p} \sum_{j=1}^{k} \sum_{i=1}^{p} (\Lambda R)_{ij}^4 - \sum_{j=1}^{k} \left(\frac{1}{p} \sum_{i=1}^{p} (\Lambda R)_{ij}^2 \right)^2 \right).$$

b) Data imputation of missing values

In real world situation, data obtained from users are usually incomplete for the input into neural network model. To mitigate this situation, we will consider using multivariate imputation by chained equations (MICE).

Multiple imputation has several advantages over other missing data approaches. Multiple imputation involves filling in the missing values multiple times, based on the observed values for a given individual and the relations observed in the data for other users. MICE, are very flexible and can be used in a broad range of settings. Because multiple imputation involves creating multiple predictions for each missing value, the analyses of multiply imputed data take into account the uncertainty in the imputations and yield accurate standard errors.

Step 2 - Artificial Neural Network (ANN) Approach

With the pre-processed datasets from both users and Viola.AI, we will optimize the personality compatibility and personalisation at an individual scale by using machine learning concepts such as neural networks.

ANN can be fit using existing data and then used to predict the compatibility of future matches. On the same note, with the knowledge of couple's compatibility dimensions, Viola.AI will be smarter in recommending and advising users in a relationship.

To achieve accurate recommendation and advice based on user's compatibility with their match/partner, ANN models like multilayer perceptron (MLP) will be considered initially. Further improvements together with other ANN models will be evaluated in the near future.

ANN like MLP mimics biological neuron; hidden units in the neural network apply specific non-linear activation functions. One of the popular activation functions is rectified linear unit (ReLU) that we consider as activation function for the units of hidden layers MLP. It improves information disentangling and linear separability. Furthermore, ReLU activation is computationally cheaper: there is no need for computing the exponential function as in case of sigmoid activation.
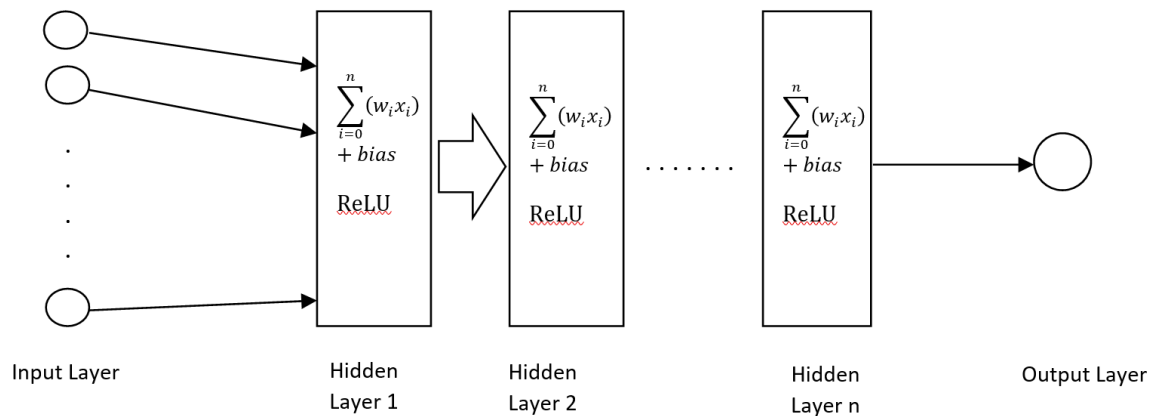

To reduce overfitting, dropout can be applied as regularization technique. As for the loss function to be optimized, Mean Squared Error (MSE) with Adam optimizer (Adaptive Moment Estimation) will be applied. The Adam optimizer has proven advantages like (1) parameters update are invariant to rescaling of the gradient, (2) step sizes are approximately bounded by the step size hyper-parameter, (3) it does not require a stationary objective, (3) works with sparse gradients, and (4) naturally performs a form of step size annealing.

The model will be trained and optimized until the accuracy reaches convergence without losing precision, recall and f1-score. Further improvements and approaches like adding convolution nodes and unsupervised learning with self-organizing maps will be explored to reduce misclassification errors and achieve higher accuracy.

Step 3 - Personality Matching

From the neural network learning, users will be assigned with their personality dimensions matrix. With this knowledge, Viola.AI will be able to better match, recommend and advice users to have an effective relationship.
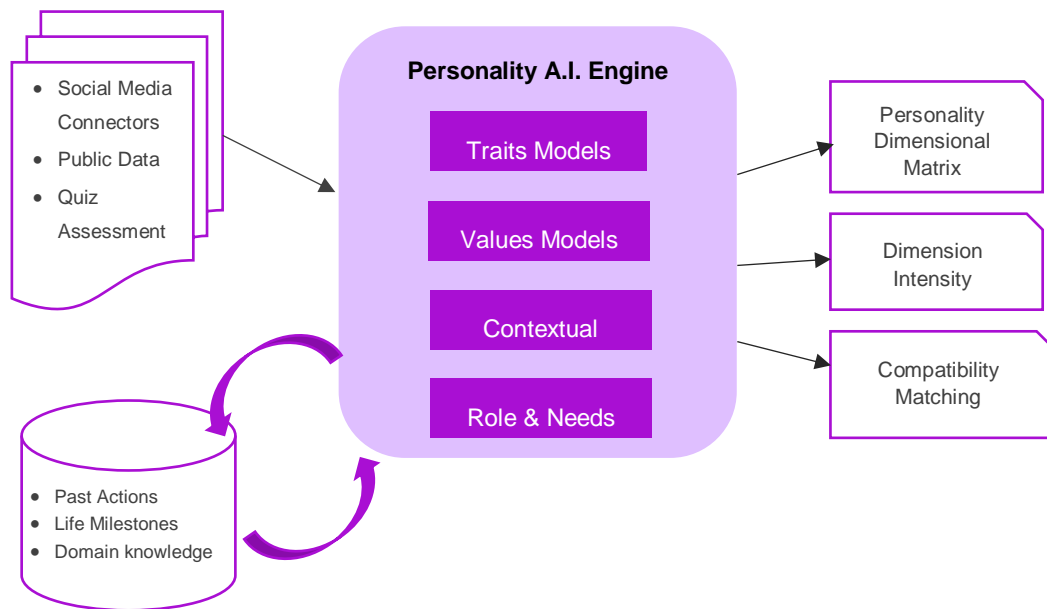
2.5.3 Natural Language Empathy

By combining natural language processing (NLP) and Sentiment analysis, we will be able to understand users' feelings and perspective better, and to provide relevant actions.
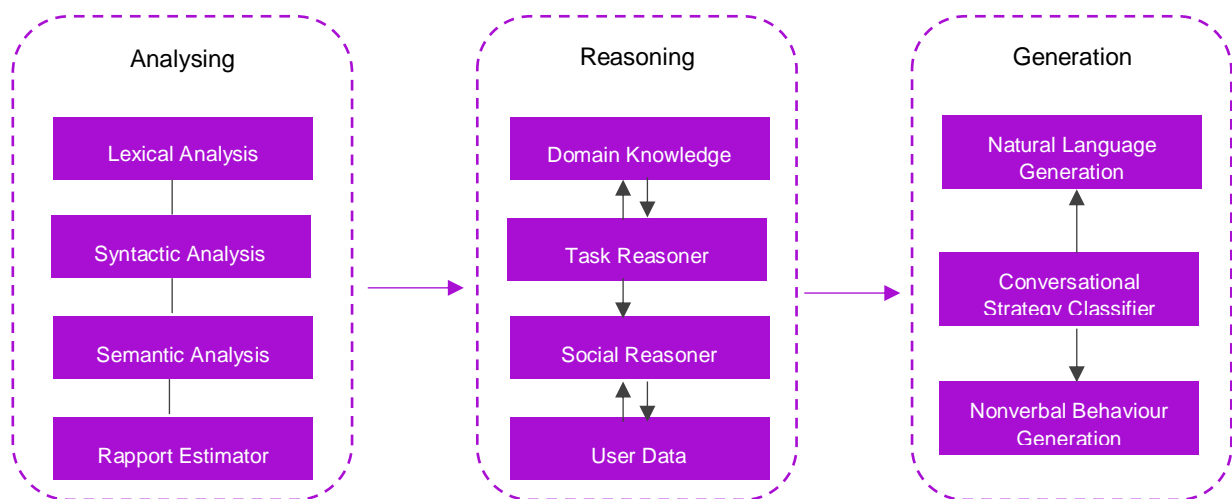
With natural language empathy, Viola.AI will be able to find out the mood of your partner so that the user can be notified of any current emotional concern. With all these knowledge, Viola.AI will be able to recommend suitable categories of actions for both users and their partners.

Another effort to humanize, Viola.AI will have an avatar that represent her with appropriate emotional responses based on the conversational content. With the ability to analyse the sentiment of the user, the avatar can display emotion to project a less intimidating and more realistic interaction with the users.

2.5.4   Blockchain Identity Verification

With the advancements in deep neural network learning, image recognition has opened up many useful applications that benefit both users and the Viola.AI ecosystem in a virtuous cycle. For now, we believe the best direction would be to leverage other 3rd party facial software that have developed this further than us.
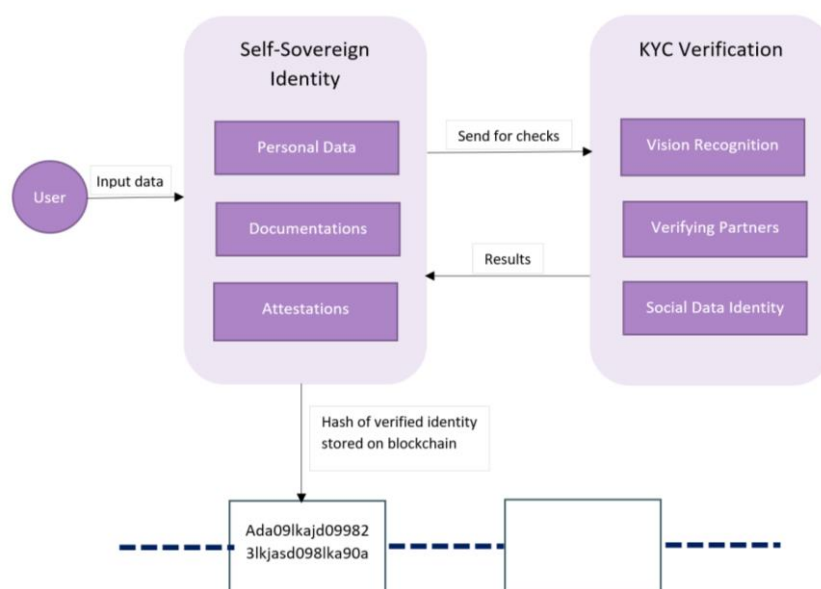
The fully encrypted personal data with optional biometric locks will be securely stored in the user's phone. By keeping this data in the user's control instead of a centralized services or database, it will prevent the vulnerability to data breaches and may even lead to denial of service, in case the service is compromised.

2.5.5   Cryptocurrencies and Blockchain - Viola.AI Wallet and Tokens

Viola.AI will be the open source cryptographic token that serves as a community currency in Viola.AI platform. It will be implemented on the public Ethereum Blockchain as an ERC20 token.

Ethereum is the preferred choice for VIOLET token due to the following benefits

- Turing-complete trust-less Smart Contracts to enforce issuance and transactional rules
- Secure with cryptography and with no single point of failure
- Immutable to changes made by a third party

With the Smart Contract and decentralized nature of this Blockchain, VIOLET will be used for all economic transactions within the platform and digital service of partners.
Viola.AI wallet will allow users to securely deposit, withdraw and view all transaction history of VIOLET token.

Viola.AI transactions are categorized into 2 main areas:
1. Internal Ledger transactions within Viola.AI platform
2. Deposit and withdrawal of tokens between Viola.AI and the Ethereum network

State channels mechanism are being proposed for bulk of the transactions occurring within Viola.AI platform. This provides significant improvements in terms of cost (gas) and speed (responsiveness).

The current underlying Ethereum network have mainly 2 potential challenges. Firstly, the transaction throughput limit that will result in longer settlement time as the volume grow with increase adoption of Ethereum. The current throughput is ~8.5 transactions per second, or approximately 740,000 transactions daily. Secondly, every on-chain transaction, regardless of size, is required to pay a fee (gas). This discourage users from making any micropayment.

With the State channels mechanism, increase speed and lower fees can be achieved as shown in the following approach:

1. Two or more participants lock the Blockchain state via multi-signature and Smart Contract.
2. Participants update the state amongst themselves by constructing and cryptographically signing transactions without submitting it to the Blockchain. Each new update overrides previous updates.
3. At some later point, participants submit the state back to the Blockchain, which closes the state channel and unlocks the state again.
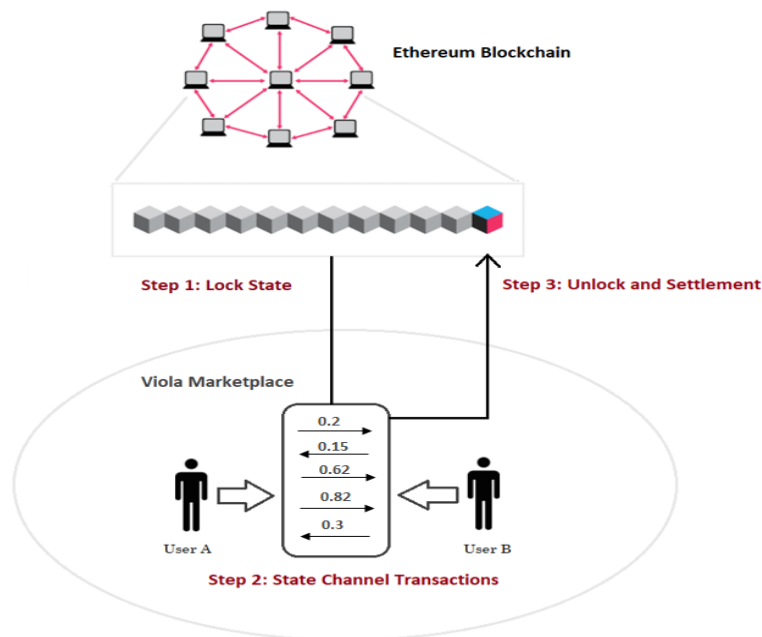
Steps 1 and 3 involve Ethereum Blockchain operations. However, Step 2 does not involve the Blockchain at all. It can contain an unlimited number of updates and can remain open indefinitely. In this sense, the Blockchain is used purely as a settlement layer to process the final transaction of a series of interactions for the final settlement, which helps lifts the burden from the underlying Blockchain.

In this regard, state channels enable any transactions to be processed instantly without facing the throughput limitations. It also has potential to reduce high transaction fees of small digital transactions. Users wishing to deposit and withdraw VIOLET token from the Viola.AI application will involve the public Ethereum network.

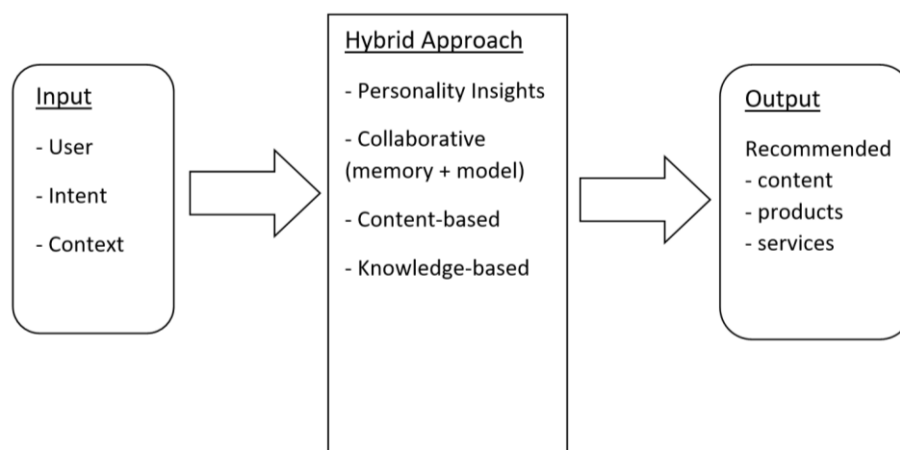### 2.5.6 Crowd Collaboration and Recommendations

Online forums and community groups have achieved a certain degree of success to allow wisdom of crowd to flourish. However, it is not easy to search for relevant relationship knowledge that is objective and specific to the user's context. On top of that, bad actors like spammers, misinformation or miscommunication may result in undesirable outcome for user's leading to an adverse impact on his/her relationship.

To mitigate these issues, Viola.AI will curate relevant content from the online communities with a hybrid model of collaborative filtering and content-based filtering. On top of this, Viola.AI will supplement with advice based on both real-life experience and proven scientific model. This will allow users to be presented with a balanced view of crowd wisdom and advice from Viola.AI.

To provide the most relevant content, product and services to users, we will be using an ensemble of ML models and algorithms. A high-level discussion of the methods and rational will be discussed here.

Combining the personality insights from the Core layer, together with collaborative and content-based algorithms, we believe this approach provides more accurate recommendations and overcome problems like cold start and sparsity.

For the collaborative layer, we will employ context-aware approach with a hybrid of memory and model based. With the awareness of contextual information like relationship status, time, location and social data, we can tailor for specific recommendations based on each current user situation.

```
Input                 Hybrid Approach          Output
- User                - Personality Insights
- Intent              - Collaborative          Recommended
- Context             (memory + model)         - content
                      - Content-based          - products
                      - Knowledge-based        - services
```

To allow better accuracy in content-based recommendation, data imputation and mapping of products and services are critical. Vision recognition and natural language processing will aid in providing details of the products and services on top of information added by partners and merchant. Knowledge-based approach will be added due to the niche domain on dating and relationship. Also, due to the conversational nature of the online communities, explicit domain knowledge is needed to provide the relevant recommendation.
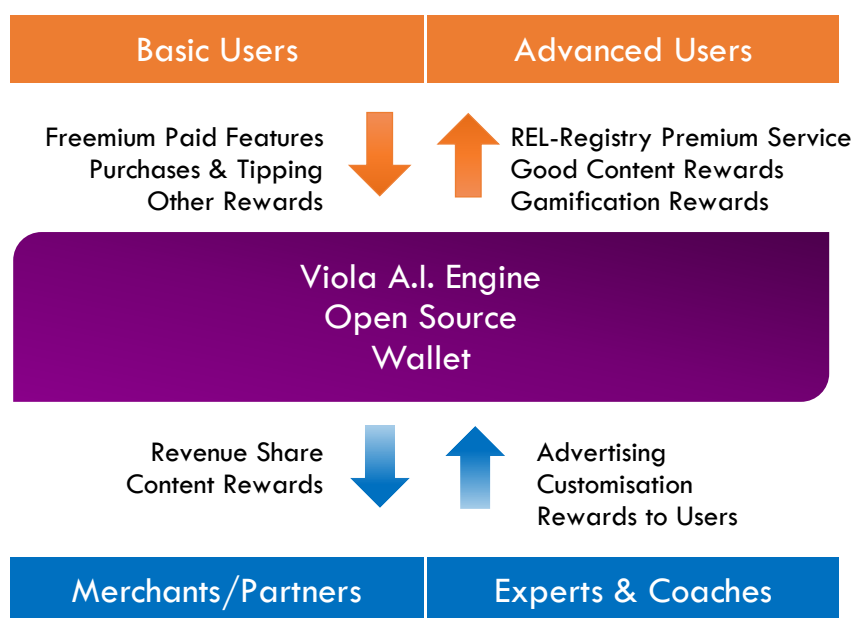
2.6 COMPARISONS

Advantages	Viola.AI	Other Dating Bots
REL-Registry Verification Decentralised with Facial Recognition Global, Open and Customisable Relationship Status Registry	✓	✗
Deep Learning about Users Background, Preference, User Behaviour, Conversation History	✓	✗
For Singles, Attached & Married Seamless Transition	✓	✗
Relationship Advices & Solutions 24/7 and Highly Personalised	✓	✗
Arranges Real Dates Hassle-Free Coordination	✓	✗
Collects Feedback Continual Machine and Deep Learning	✓	✗
Reminders on Occasion Smart A.I. Calendar	✓	✗
Goods & Services Convenient & Wide Selection	✓	✗
Community Support Quality Content & Services	✓	✗
Gamification Improves Relationship with Fun	✓	✗
Humanized Avatar An A.I. bot with feelings & expressions	✓	✗

3. Tokenomics & Smart Contracts

3.1 Token Economy

Viola.AI's business model and ecosystem are centred on the VIOLET token. The token is both a utility and currency which is required for users to enjoy the services of Viola.AI in the following:

Token Uses	Description
REL-Registry Premium Service	Users can use VIOLET tokens to pay for premium REL-Registry Smart Contracts and other related services to commit their marital/relationship status to the Blockchain
Payment for Goods and Services With Hedged Escrow System	Users can use VIOLET tokens to pay for paid content, goods and services from the experts and merchants. Payments can be held in escrow according to the payment terms of the transaction.
Community Usage Quality Content and Advices	Rewards increase as the quality of content becomes higher. Level 1: Great content that helps the users Level 2: When the content is used by Viola.AI to improve her advice algorithm as well Level 3: When the content is very well used by Viola.AI and hits usage milestones
Revenue Share	For every transaction that experts/merchants and partners make, 1% to 10% of the revenue will be shared with Viola.AI., of which 5% will be burnt and removed from circulation.
Advertising Fee	Experts/ merchants can pay for Viola.AI's advertising programme by VIOLET tokens.

Rewards Referral	Referral program for users, merchants and partners to share into the revenue growth of Viola.AI by paid commission every time a person (or business) they referred makes a purchase or spends on advertising on Viola.AI
Rewards New Verified Users	A small amount of VIOLET Token shall be rewarded to each new verified user that joins the Viola.AI community to both encourage active use of Viola.AI and to make their first purchase.
Rewards Gamification	Rewards given will be curtained on regular updates that provide data, good usage of Viola.AI and achieving a high relationship or dating "score" in the gamification element of Viola.AI.
Rewards Bug Bounty	Reporting bugs in Viola.AI can also earn points in VIOLET. The bigger the bug reported and verified, the more VIOLET tokens shall be given.

It is important to note that the value of VIOLET token will be largely determined by the circumstances in the future with no guarantee possible on our side. The best we can do is to simply execute well to create a strong and useful product with good utility for the VIOLET token in the future.

3.1.1 Payment to Merchants and Hedged Escrow System

VIOLET tokens are required to purchase paid content, goods and services from the experts and merchants. The terms of the purchase will be stated by the merchant if it's a full payment, deposit with escrow, escrow with milestones or a full escrow transaction. The user/purchaser will indicate if he or she accepts the payment terms. Viola.AI will then process the transaction accordingly. If funds are to be held in escrow, Viola.AI will use its Ethereum-driven Smart Contract escrow system to hold the funds and distribute accordingly upon the user's acknowledgement. The escrow fund will be hedged against the value of the content, good and services purchases by using Ethereum and Bitcoin as the holding crypto-currency which will help stabilise the price during this escrow holding period. Viola.AI will make up for any differential in value when the funds are finally released from the escrow into the seller's hands.

Use Case

Viola.AI reminds Elizabeth that it is Henry's birthday in 7 days' time. In response, Elizabeth asks Viola.AI for ideas on gifts to buy for Henry's birthday. Viola.AI is aware of both Henry and Elizabeth's habits and preferences, so she presents a list of relevant recommendations. Elizabeth then chooses the "Heavenly One-day Spa Couple Getaway" package to celebrate. The Merchant stated that the payment terms is a deposit with the rest of the payment held in escrow released when they both arrive at the Spa. Elizabeth agrees and uses Viola.AI to send the funds accordingly. Elizabeth surprises Henry on his birthday and when she arrives at the Spa, she uses Viola.AI to release the rest of the payment to them from Escrow. Feeling very satisfied with the experience at the end of the day, Elizabeth gives the spa an additional small VIOLET token tip to thank them.

3.1.2   Community Usage

To seek advice, content, ideas and even more options from the available merchants and partners, users can give a small VIOLET token as a "thank you" reward to the best response they get which they can select.

This is a huge incentive for experts, merchants and partners as Viola.AI will take note of the experts/ merchants that are receiving these VIOLET token rewards and they will be recommended more regularly as compared with experts/ merchants that do not have a record of accomplishment. Users can also tip great content and ideas that they see on Viola.AI, boosting the reputation of the content in Viola.AI's eyes as well as rewarding the producers of the content.

Use Case
Elizabeth has been married to Henry for several years now. Recently, she has been feeling more distant from Henry, especially after they had their 2nd child. Unsettled by this feeling, Elizabeth sends out an anonymous request to the community with a small VIOLET token reward (although she could have excluded the reward). She describes her problems and feeling towards her marriage and wants to know if it is normal. Soon, people starts to respond, including Viola.AI's bot. Elizabeth learns that a good number of the women in Viola.AI are in the same shoes and learns from their stories, experiences and outcomes. Viola.AI also chips in and let Elizabeth know the facts on her situation (from her huge DB analytics) and some proven concrete steps she can take to improve the situation. Elizabeth is thankful for the support and responses and gives the reward to Viola.AI who then distributes it evenly to all users who responded meaningfully.

3.1.3   Revenue Share

To sustain Viola.AI, we will take a share of the revenue that the merchants and the partners collect for the transaction made on Viola.AI.
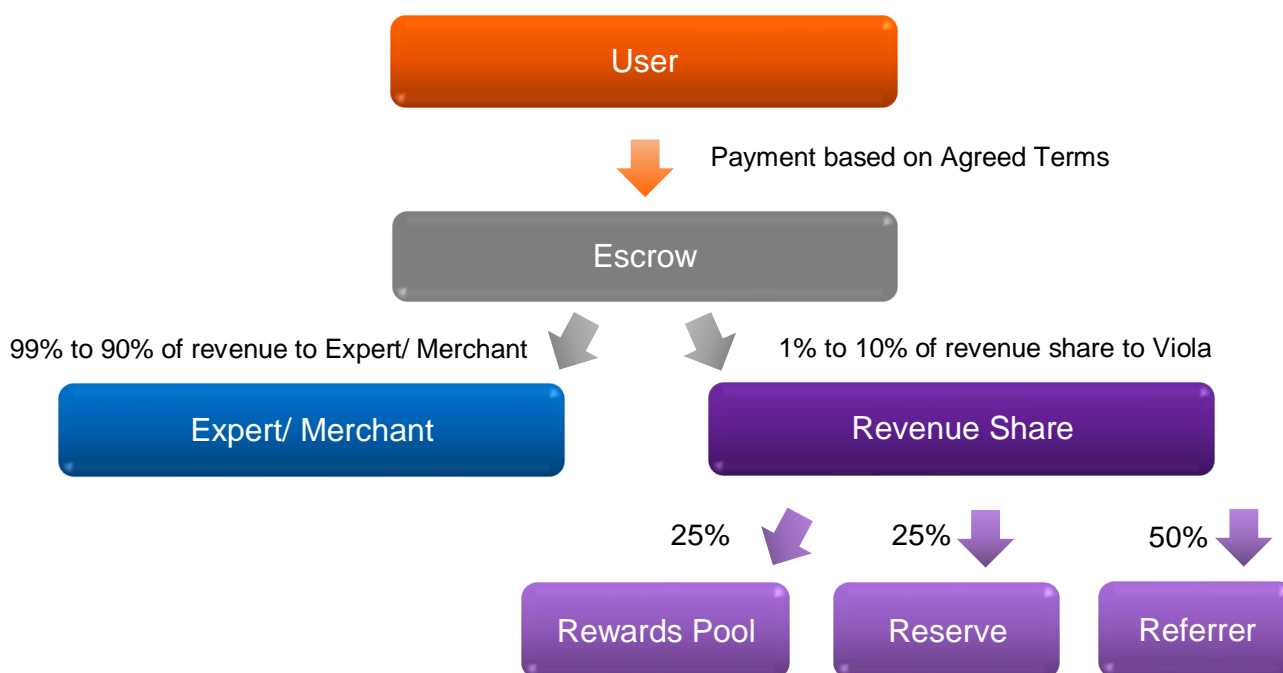
For e-goods and e-content purchases, a range of 1% up to a maximum of 10% shall be shared. For goods and services purchases, a range of 1% up to a maximum of 5% shall be shared. Of the revenue share amount, it shall be further split on the Viola.AI platform with 25% to be sent to the Viola.AI Foundation for platform development and maintenance. Another 25% is sent to replenish the reward pool and 50% commission paid to the referrer. Where there is no referrer for a transaction, the 50% will be distributed to rewards pool and Viola.AI Reserve equally.All revenue share arrangements will be programmed into Viola.AI's Smart Contracts for the appropriate execution and done in a trustless manner for the ease of mind for all sides.

3.1.4 Advertising

Merchants can use Viola.AI's advertisement program and pay for it via VIOLET tokens which creates another pillar for VIOLET tokens and more liquidity for users. For the users, any advertised content from the merchant will be clearly indicated to them to avoid any misunderstanding.

In addition, 5% of the advertising commission scheme will be programmed into Viola.AI's Smart Contracts for the appropriate execution to the referrer that brought the merchant into the Viola.AI's platform as a "thank you" for helping to grow Viola.AI marketplace.

3.1.5 Rewards

To encourage the growth of Viola.AI, VIOLET tokens are rewarded for a range of actions taken by users.

- **New Verified User**
  VIOLET tokens will be rewarded to new verified users to encourage active participation in the community and making their first purchases on the platform.

- **Gamification**
  Gamification module of Viola.AI allows users to earn VIOLET tokens when they complete certain tasks and milestones which provide more data to improve Viola.AI's machine learning capability that helps users to better their dating and relationship journey.

- **Bug Bounty**
  As Viola.AI seeks continual improvement on our platforms, reports on bug issues will be rewarded with VIOLET tokens depending on the severity of the bug.

- **Referral**
  When a referrer recommends another user to purchase any goods and services, we would reward the referrer with 10% of the 1% to 10% of the revenue share in VIOLET tokens for every purchase made. This essentially gives them a lifetime of residual income and a great incentive for users, the community, merchants and partners to help grow the Viola.AI user-base with us.

  Similarly, when the referrer introduces another business to purchase advertising service from Viola.AI, the referrer will earn a commission of 5% of the advertising amount every time the business makes a purchase.

3.2 SUSTAINING THE REWARDS POOL

To prevent Viola.AI's Rewards Pool from running dry, every time the pool decreases by 50%, the rewards shall be reduced by 1/2 accordingly. This helps rewards early adopters of the Viola.AI platform, keeping the pool from running out too fast. The rewards pool, however, is supported by the monthly 40% of the revenue share to Viola.AI which shall continue to replenish Viola.AI's reward program for all parties and keep it at full capacity as much as possible.
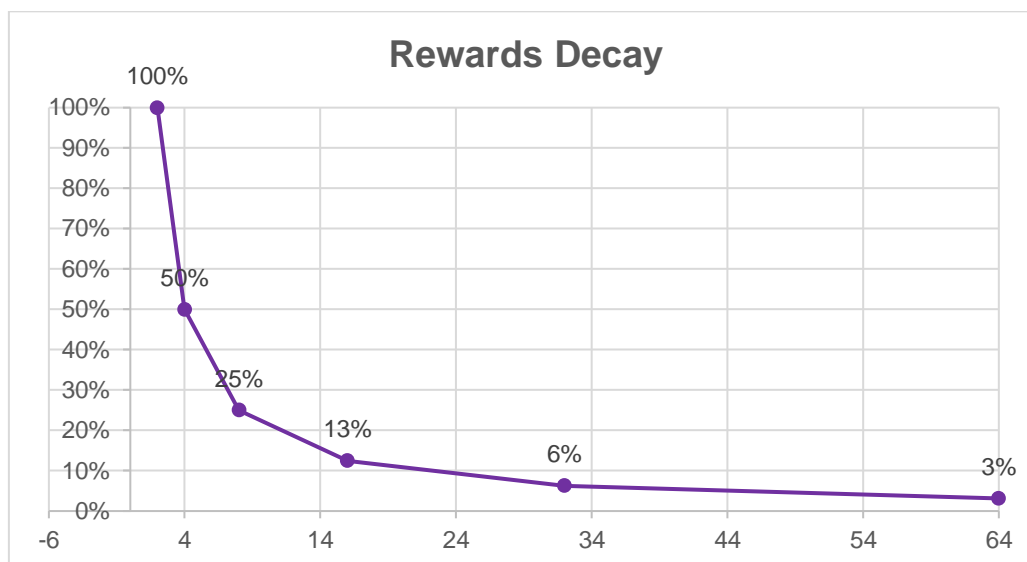
Token Uses	User	Experts/ Merchants	Partners
REL-Registry Premium	✓		
Payment for Goods and Services	✓	✓	✓
Community Content Contribution	✓	✓	
Revenue Share		✓	✓
Advertising Fee		✓	
Rewards Referral	✓	✓	✓
Rewards New Verified Users	✓		
Rewards Gamification	✓		
Rewards Bug Bounty	✓	✓	✓

3.3 WHY VIOLET TOKEN?

Strong and Experienced Team

Viola.AI is built by proven pioneers who have been in the industry for the last 14 years. Our founders are the leading dating entrepreneurs in South East Asia with a combined 4000+ media coverage including international media (e.g. BBC, Forbes, The Huffington Post). We are seasoned brand and business builders who are experienced in multi-country expansion; our brick-and-mortar businesses have presence in 6 countries. We are experienced managers, currently manage a team of over 110 people. We have developed several successful dating platform and services from scratch even though we did not have much prior experience. We were hungry to learn and have managed to master the technology behind it. We are here to stay in the industry as we find it meaningful and have long staked our reputations and finances on it.

Disruptive Concept

Viola.AI is a revolutionary idea that can disrupt the industry and offer greater transparency and trust in the dating and love industry. At the heart of the project is the VIOLET tokens which we are imbuing with plentiful of useful utilities to ensure its value and usefulness.

Strong Starting Foundation

Viola.AI is not starting from scratch and has a good foundation to build upon. Once Viola.AI's is launched, we would have a base of 1.4 million users to work with as all of our services and products will immediately come in as integrated 3rd Party merchants/Partners from the start. We can cross-market and cross-sell Viola.AI service to our existing platforms to ensure that it is generating revenue from day one via the revenue share. Another important part of the success of any A.I. project is the adequate datasets to train with. Viola.AI can tap on our existing 3500 datasets and 1.1 billion data points accumulated over 14 years and will have over 100,000 dates to train and learn from. Our existing platforms already possess several key features that will be on Viola.AI, e.g. profiling, matching, arranging dates and collecting feedback. Therefore, we are not going on trial and error as we already have a huge amount of experience to tap on to ensure the features work well.

Incentive for Earlier Buyers

Viola.AI is designed to reward early buyers of the VIOLET token. The earlier tiers of the Token Sale give more bonus tokens to earliest backers of the project as an appreciation for their faith in us, for making Viola.AI a reality and helping us to create a robust community earlier.

Starting Utility with Existing Services

VIOLET token users will be able to spend their tokens on our other existing platforms. This ensures there is decent amount of usage from the start. We have also identified partners whom we can work with to put Viola.AI and VIOLET tokens onto their platforms.

4. TIMELINE

4.1 FIRST YEAR PRODUCT DELIVERABLES – MVP

We will spend 2018 and 2019 adding on to our existing chatbot development to add the A.I. depth and key features and should be able to complete these Minimum Viable Product core developments by the end of 2018 as below:

Product Modules

2018 Q2

Personal Relationship A.I. Assistant Module for Singles & Attached Couples (Phase 1)
- Provides personalized relationship and dating advice.
- Proposes compatible matches for singles
- Arranges dates with matches or partners by confirming the venue, date and time of the meetup.

Viola.AI Wallet, Marketplace & Token Application
- Securely deposit, withdraw and transfer tokens.
- Get instant updates on each transaction.
- View, monitor and verify transactions in the transactions history.

2018 Q3

Verification Features: A.I. and Blockchain
- Rel-ID Registry: Ensuring the authenticity of the profiles using the latest computer vision technologies and layering with user's social media photos.
- Smart Recognition: Securing your profile using 'Smart Contracts'.

Personal Relationship A.I. Assistant Module for Singles & Attached Couples (Phase 2)
- Proposes weekend or holiday plans based on the couple's preference and personality.
- Emulates an expressive avatar that changes emotion according to the conversation's context.
- Integrates and organizes user calendar.

Recommendation Module
- Onboard merchants and partners for value-added services and products.
- Enables efficient purchase of services and products using Smart Contracts.
- Provides a feedback platform for service quality review.

Viola.AI Wallet & Token Application
- Goods and service payment setup
- Basic revenue share and commissions Smart Contracts

Integration Module
- Integration with all Lunch Actually Group Ecosystem

2018 Q4

Smart Features: A.I. and Blockchain
- Smart Personality Assessment: Creating a data pipeline to build our deep learning models.
- Smart Match Recommendation: Matching profiles based on a machine learning algorithm.
- Rel-ID Registry: Allow married couples to verify, create and view marriage contract on the blockchain.

Product Modules

Personal Relationship A.I. Assistant Module for Singles & Attached Couples (Phase 3)
- Curates relevant content from community.
- Predicts possible issues and proposes action plans for singles or couples.
- Recommends services and products to enhance relationship.

Community Module
- Provides a Content Management System for users and experts to contribute in the community.
- Allows users and experts to earn rewards through their contributions.
- Includes a voting system to gain insights from the community.

Viola.AI Wallet, Marketplace & Token Application
- Marketplace system set up with token and credit card usage
- Multi-tier commissions and revenue share Smart Contracts
- Basic reward program in place

2019 Q1

Personal Relationship A.I. Assistant Module for Married Couples
- Provides personalized relationship advice for married users.
- Predicts possible issues and proposes action plans for married couples.
- Recommends services and products to enhance relationship.

Community Module
- Enables a system of bid and offerings for digital services.
- Begin curation of content for Viola's A.I. learning
- Begin Rewards program for content curation

Viola.AI Wallet, Marketplace & Token Application
- Include bids and offers token transactions
- More advanced A.I. recommendations engine for marketplace developed with ratings playing a bigger role
- More aggressive build up Partners, Experts and Merchants listings and offerings

4.2 36-MONTH ROADMAP

	2018	2019	2020
The Products	Dating module Courtship module Marriage module	Refinements Add a new segment (e.g. Parenting)	Refinements Add a new segment
The Markets	Singapore Malaysia Hong Kong Australia	US & Canada UK India Taiwan Japan (partner) Thailand Indonesia	Rest of the World
Target No. of Users	1.7+ million	8.5+ million users	25.5+ million users
Sources of Revenues	Revenue share Advanced Content	Advertising Special Customisation	Revenue Share Advanced Content Advertising Special Customisation

5. COMPANY BACKGROUND

5.1 VISION AND VALUES

VISION	CORE VALUES	MASSIVE TRANSFORMATIVE PURPOSE	BIG HAIRY AUDACIOUS GOAL
To be the World's Most Effective Dating Service	Inspire the Best in All Make It Happen Leave No Man Behind Stay Positive and Never Say Die	Better Lifetime Relationships	One Million Happy Marriages

We started out in the dating industry 14 years ago with the vision to be the "The World's Most Effective Dating Service". In the past few years, we have also included the Massive Transformative Purpose of "Better Lifetime Relationships" and BHAG of 1 million happy marriages.

It has not been easy to stay true to this vision as competitors have employed capitalistic tactics of using fake profiles to avoid starting from zero database and some started using bots and bait users to sign up for paid subscriptions to raise their revenues, gaining a quick competitive edge over us. Being effective meant that your best customers leave you and you earn less which is one of the paradox of dating industry. However, we are reminded about our vision through the many thousands of dating couples and married couples who have met through our multitude of services that operates in 6 countries of Singapore, Malaysia, Hong Kong, Thailand, Indonesia and Japan (Joint Venture with mixi, Inc).

5.2 PLATFORMS AND DATA/CONTENT

In response, we have chosen to invest heavily into research and development over the last decade to fulfil our vision and BHAG. We started with an offline dating service with high price points and manual processes which meant limited scalability. However, this ensured we had plentiful of real face to face experience and knowledge about singles and it helped us understand what they wanted.

Leveraging on our experience, we launched esync dating more than 7 years ago, an online "hybrid" matching service with a lower price point. After completing a comprehensive quiz, users will be matched through our comprehensive matching algorithm based on 16 areas of compatibility. The twist is singles can enjoy a personalized service by communicating with our dating consultants over the phone or text. This ensures singles do meet up with their matches over a date. This well-received hybrid product is now a multi-million-dollar business.

4 years+ ago, we created Lunch Actually Academy, our education arm that helps singles improve their first impressions and dating skills so that they would be more successful in their dating journey. The tens of thousands of coaching sessions have produced plenty of proven material and content that we can deploy in Viola.AI. We have also entered the relationships market with couple events and relationship coaching.

2 years+ ago, we launched our LunchClick dating app, a self-service platform that focuses on bringing singles from online to offline (real dates) as soon as possible. All our matching platforms are centred on bringing people on real dates and in total, we have arranged more than 100,000 dates. Dates feedback is incorporated into our system. We have accumulated not just online dating behaviour but also post-date data because all our services are full loops i.e. we have data on what happens offline in real face to face dates. Hence, we have a unique advantage over most other dating services that tend to be focused just online or offline. In the last 14 years, we have accumulated over 1.1 billion data points in over 3500 datasets giving us a strong foundation for training sets for A.I. development.

Business Footprint
Singapore, Malaysia, Hong Kong, Thailand, Indonesia, Japan (JV)

Product Ecosystem
2 Online Sites, 3 Offline Services, 4 Dating Apps,

Data
Over 3500 datasets
1.1 Billion Data Points

Members
Over 1.4 Million +

Matches
Over 30.1 Million

Dates
Over 100,000

Strong Content Network
Matchmaking Institute and Field Experts

Business Monetization
Freemium, Mass, Premium

Industry Experience
Industry pioneer with over 14 years' track record in the industry

5.3 EMBARKING ONTO VIOLA.AI

With Viola.AI, we are embarking on our most ambitious project to date, one that could possibly render most of our earlier dating platforms obsolete. But in the years of conceptualizing and planning for Viola.AI, we believe that we must not be afraid to "attack" ourselves but we must always be at the forefront of tech developments.

All of Viola.AI development and IP are placed under a separate company subsidiary called "Viola Tech Pte Ltd", which will have its own team and will operate like a start-up. This helps us ensure proper distance between the entities and ensure that all funds received from the token sale is only used for Viola.AI development.

5.4 TEAM & DEVELOPERS

5.4.1 Core Team Members

VIOLET LIM
Co-Founder
Chief Executive Officer

Violet Lim has been in the dating industry for over 14 years. She has proven expertise in brand building. Over the years, Violet has built a strong brand equity for Lunch Actually Group's products with over 4000 media appearances worldwide. Violet will spearhead Viola.AI's brand building efforts which are critical to the expansion plan of Viola.AI.

JAMIE LEE
Co-Founder
Business Development Head

Jamie Lee is a visionary who has conceptualised many of our past products. Viola.AI is his brainchild that has been in the making for 2 years. With his knowledge and strong belief in the potential of A.I and Blockchain technology, Jamie provides the strategic, business development and commercialization direction for Viola.AI.

ZAM ONG
Co-Founder
A.I. & Crypto Protocol Architect

Zam Ong is highly experienced with 15 years in technological development. He has expertise in A.I. and has been leading the research and development in Cryptocurrency and AI. Zam is designing Viola.AI's Blockchain and A.I. technologies to create a powerful, decentralised and personalized A.I. engine for Viola.AI.

MARTTI DUMANGENG
Blockchain &
Technology Solutions Head

Martti has 10 years of holistic experience in full stack development, A.I. and Machine Learning, database administration and Blockchain development. He is highly experienced in building cloud infrastructure and security designs. Working on many aspects of the Smart Contract development and technology architecture of Viola.AI.

MOHAN RAJ SIVAKUMAR
Senior Software Engineer

Mohan has strong expertise in full stack development and infrastructure development across banking, academic and technology industry. He attained Master of Computing in National University of Singapore. Mohan will focus on building a secure and robust backend infrastructure for Viola.AI platform and product development.

CHRISTINA THUNG
Head of PR

With 8 years of experience in PR, Journalism and Communications, Christina has successfully led the branding initiatives as the Group Head of PR & Partnerships for Lunch Actually Group, and generated over 200 media coverage in 2017 across Asia. With her collective experience, Christina will spearhead the PR efforts for Viola.AI.

FRED LACORTE
Head of Community Management

Fred is the marketing expert with 9 years of progressive record in crowdfunding, retail-HNW investments and dating services in Asia. He is experienced in leading onlne marketing effort in Lunch Actually Group. Combining with his strong interest in Blockchain technology, Fred will lead the content strategizing and community management of Viola.AI.

LI YHEE CHIN
Business Development & Partnerships

Li Yhee has a strong interest in cryptocurrency and Blockchain innovation. She is experienced in strategy and business development and is a current MBA candidate at National University of Singapore. Leveraging her knowledge of Blockchain community, she focuses on business development and partnerships of Viola.AI by connecting client stakeholders across various domains.

5.5 ADVISORS

LISA CLAMPITT
Advisor

Founder and President of the Matchmaking Institute (MMI) in New York, connecting relationship professionals to spread the love. The MMI is the biggest network of dating professionals and coaches worldwide.

HONG TING WONG
Advisor

An early adopter of cryptocurrencies over 3 years ago and a serial entrepreneur, Hong Ting is currently founder & CEO of Botbot.AI and 2359 Media, powering businesses with A.I. technology.

DATO LARRY GAN NYAP LIOU
Advisor

Larry was the Managing Partner for Accenture Asia, and between 1999 to 2003 he managed the firm's multibillion dollar Venture Fund in Asia Pacific. Presently, he is Chairman of Cuscapi Berhad, Rev Asia Berhad and Diversified Gateway Solutions Berhad and the British Malaysian Chamber of Commerce and the CEO/Managing Director of Formis Resources Berhad.

BRUNO VANRYB
Advisor

Bruno Vanryb is a French Serial Entrepreneur who founded Avanquest, a listed and global software publisher. Bruno Vanryb currently heads Be Brave, a consultancy firm, and act as an Executive advisor for different Tech companies. Bruno Vanryb is also Senior Partner at Avolta, an M&A and Fundraising Boutique currently involved in various ICOs.

PHILIPPE RODRIGUEZ
Advisor

Philippe is the President of Bitcoin Association in France since 2014. He had founded Avolta Partners which actively helps raise capital and manages M&A process for various ICOs and startups in the technology industry. Other than holding Masters in Computer Science and MBA, Philippe is also an author of the book "La Revolution Blockchain" published by Dunod.

MICHAEL REECE
Advisor

Michael is a Blockchain entrepreneur with 5 years of experience in cryptocurrency and launching of ICO, supported by his 25 years of full stack developer experience in IT business. In addition, Michael owns NicheAdNework which is a niche market advertising network with a large dating online presence with over 200 million impressions a month.

PETER SIN
Advisor

Peter Sin serves as the Co-Head of Digital Currency Sub-Committee of Singapore Cryptocurrency and Blockchain Industry Association (ACCESS) and the Co-Founder of Singapore Bitcoin Club, Singapore's largest cryptocurrency trading educational community. He joins selected ICOs as advisor, including MEGAX, VRT World, and Bounties. He is a frequent speaker and panelist on forums and seminars on cryptocurrencies. Peter is an experienced financial professional in Singapore's leading financial advisory firm.

CALEB YAP
Advisor

Caleb is one of the Co-Founder of Singapore Bitcoin Club, Singapore's largest cryptocurrency trading educational community. He regularly conducts educational workshops and seminars on cryptocurrencies. His views on different investment strategies and different aspects of cryptocurrency are highly valued by the local community. Besides, he is also an experienced real estate consultant with one of the largest property agency in Singapore.

PRAKASH SOMOSUNDRAM
Advisor

As a highly ranked as an influencer in the fintech space in Asia, Prakash is active in startup ecosystem development and promotion in Singapore. He is leading two ICOs, as Strategy and Corporate Development for Lalaworld and Co-founder for Aditus. In 2016, he was awarded as one of Singapore Indian Business Leaders (SIBL). Prakash is also a leading digital entrepreneur who founded Yolk that served Lenovo, Microsoft and Singapore's Ministry of Communications.

KENNETH TAN
Advisor

Kenneth is currently the co-Founder at FundYourselfNow, a Singapore-based crypto-currency crowdfunding platform. He is a thought leader and active writer in the Blockchain space and has several media coverage as Business Times Singapore, and major crypto publications. He has over 10 years of experience in consulting for MNCs and government agencies in the design, development and implementation of digital applications and platforms.

BRIAN CONDENANZA
Advisor

As an early investor in Bitcoin, Brian shares a passion for Blockchain technology. Today, Brian advises Blockchain companies to achieve their goals & uses his experience with social media to help them connect better with their audiences. He is also an Internet entrepreneur, founder of Fluo Shoes and has been featured in the media such as the Huffington Post, New York Mag and The New York Times.

ALEXANDER HAXTON
Advisor

Alexander was an early adopter of Bitcoin in 2012. He began trading and investing in Bitcoin while being a cryptocurrency advocate on social media. Since then, he has become a cryptocurrency and Blockchain consultant and advisor to companies seeking to embrace the Blockchain and cryptocurrency sphere.

WARREN WHITLOCK
Advisor

Warren Whitlock is a digital business development strategist and one of the top influencers in the Blockchain space. He has helped businesses transform to a new way of doing business using social media and online marketing and promotion to attract the right audience from the 2 billion people using Internet. Warren has worked in technology, business services and broadcasting, and is currently involved with media, health and several startups.

JEREMY KHOO
Advisor

Jeremy Khoo is a business operator with a passion for the Southeast Asian e-commerce space. He is currently Group CEO of iFashion - a leading multi-million regional fashion and lifestyle retail company of which Jeremy co-founded retail Blockchain MegaX which successfully conducted a token sale and deployed the cryptocurrency for use. He also advises and help build exciting Blockchain projects such as Consentium.

RAYMOND NG
Advisor

Raymond Ng is a pioneer of Open Source in Singapore, having organized the Singapore Linux Conference & LinuxWorld Expo 20 years ago. Raymond Ng also majored in Artificial Intelligence during his study of Computer Science in National University of Singapore, and he used Open Source to develop A.I. applications.

HENRY WANG
Advisor

Henry Wang is the co-founder of International Blockchain Fund. He is an experienced blockchain entrepreneur based in Silicon Valley and has invested and advised several blockchain projects.

6. TOKEN SALE

6.1 INITIAL TOKEN SALE

The soft cap we need to power this project forward is US$1 million, while the hard cap is US$12.5 million. When we hit the full hard cap, we will be able to develop the project further and take Viola.AI global faster.

6.2 OVERVIEW OF TOKEN SALE

Items	Details
Project Description	Viola.AI aims to be the global decentralised relationship/ marital registry with smartest A.I. for dating and relationships when it is fully launched
Token Symbol	VIOLET (VAI)
Token Background	VIOLET is built as an ERC20 token on the Ethereum Blockchain which ensures security and high liquidity of the token's ecosystem.
Start Date	Target latest in June 2018
End Date	30 days from Start Day or earlier if the hard cap is achieved
Soft and Hard Cap	US$ 1 million (soft) US$12.5 million (hard) – End of Campaign's exchange rates determine if cap is achieved.
Listed on Exchange	In Progress
Token Public Sales Price for one VIOLET	US$0.20
Exchange	US$1 to 5 VIOLET
Maximum Token Supply	A maximum of 250 million tokens
Tokens for Crowd Sale	37% of total supply
Pre-Sale Available	Yes – Maximum 7.5 million tokens Pre-sale has closed successfully.
Accepted Currencies	ETH, BTC & USD

6.3 HOW IT WORKS

The following will be how the Viola.AI Token Sale will work:

- All purchases must complete their KYC process for the purchase to be legitimate.
- All the funds from the Token Sale shall be held in Escrow till the end of the Token Sale success or failure. If we are unable to sell at least US$1 million of tokens in all, we will make full refund to purchasers.
- After the Token Sale, VIOLET tokens will be tradable on a recognized exchange or ERC20 token exchanger and at some points in the future after that. We will actively get our tokens listed as soon as possible.

6.4 TOKEN SALE SCHEDULE AND BONUSES

Timeline	Details
Pre-Viola.AI Public Token Sale	KYC and whitelisting process begin. Details of interested parties will be collected. Pre-sale available for strategic buyers and people who are interested in coming in early before public sale for the best rates
Viola.AI Public Token Sale Token Sale Day, Latest June, 12pm First 24 hours: 1st bonus	Token Sale Day latest by June 2018 at 12:00PM at Singapore's Time Upon the start of the public sale and in the first 24 hours (1 day), whitelisted users are able to participate in the Token Sale and will get 1st tier bonus.
Viola.AI Public Token Sale Day 2 & 3: 2nd bonus	After the first 24 hours (1 day), the tokens will be sold at 2nd tier bonus for the next 2 days.
Viola.AI Public Token Sale Day 4 to 10: 3rd bonus	After the first 3 days of the token sale, the tokens will be sold to the Whitelist at 3rd tier bonus for the next 7 days.
Viola.AI Public Token Sale Day 11 to 30: No bonus	After the first 10 days of the token sale, the tokens will be sold to the Whitelist without bonus tokens for the next 20 days or when hard cap is hit based on the current ETH and BTC exchange rates, whichever comes first.
Viola.AI Public Token Sale Last day is 30 days after Day 1	End of Viola.AI Token Sale at 12:00PM at Singapore's Time
Post – Viola.AI Token Sale Token Sale end day + 3 days	All unsold tokens will be burnt 3 days after Viola.AI Token Sale
Post – Viola.AI Token Sale Token Sale end day + 7 days	Issuance of VIOLET tokens. Amount of VIOLET to be issued is pegged against the exchange rates at the point of purchase and at the end of the token sale, whichever is the highest.

6.5 TOKEN STRUCTURE

6.5.1   Token Distribution

The following diagram illustrates how VIOLET tokens will be distributed among various stakeholders.

Token Distribution
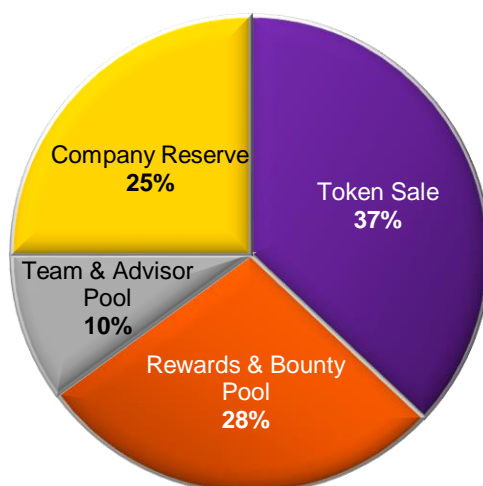
- **Token Sale (37%)**

  A maximum of 92.5 million tokens will be issued for the token sale. Any bonus tokens issued will have a lockdown period of 60 days upon the end of Public Token Sale. The bonus and rewards tokens will be issued 60 days after the end of Public Token Sale. The token amount purchased is calculated based on the exchange rate at the point of purchase or the end of Token Sale, whichever is higher.

- **Rewards & Bounty Pool (28%)**

  The rewards program is an important part of the growth, community, content creation and engagement strategy for Viola.AI.

- **Company Reserve (25%)**

  Company Reserve Pool is used for future development, including future fund raising, academic research and for expanding the rewards pool. This reserve shall have a 1-year vesting.

- **Team, Partners and Advisor Pool (10%)**

  All team members will be vested in the Company for a total of 2 years with the 30% of the tokens vested till the 1st Year and the rest of the 70% tokens vested till the 2nd Year. This will include an option pool for future associates as well. For advisors, they will be vested for 6 months.

6.5.2   Use of Funds

The following diagram illustrates how the funds raised from VIOLET Token Sale will be utilised for various function to support the development of Viola.AI.

Funds Distribution
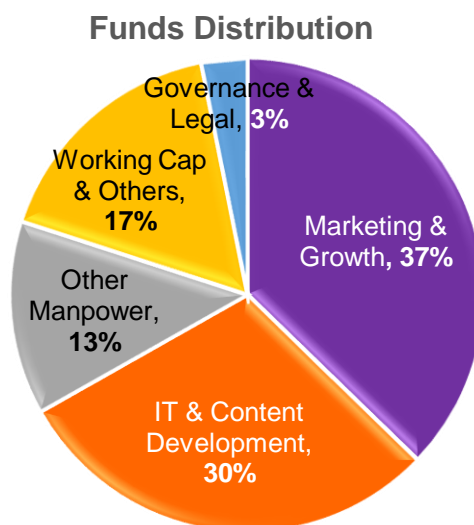
- **Marketing & Expansion (37%)**

  The largest portion of funds will be invested on business expansion (which includes branding, marketing, business development) to help Viola.AI to go global quickly and enjoy economies of scale. The bigger the user base and the transaction volume, the higher the VIOLET token's valuation and liquidity.

- **IT& Content Development (30%)**

  The next biggest cost item would be the research, IT development, content development and IT maintenance required for Viola.AI to become a truly useful and effective tool for all users. In research, we would work with reputable academic partners to ensure Viola.AI is developed based on solid scientific principles while partnering with practicing experts in their respective domains for more practical and pragmatic content to be put on Viola.AI to value add to users.

- **Other Manpower (13%)**

  Funds will also be needed to build the project team (excludes IT team) to grow and execute the plans for Viola.AI. The team is estimated to grow up to 25 to 28 people by Year 3.

- **Working Capital, Reserves & Others (17%)**

  Working capital and other expenses includes the many support functions, rental and other operational costs that is involved in running a business. This includes a cashflow buffer for unforeseen circumstances as well.

- **Governance & Legal (3%)**

  As the company grows, the legal and governance area includes costs to maintain the company.

7. FINAL WORDS FROM THE FOUNDERS

14 years ago, we started out in the love industry with a 3-people team and today, we have grown into a regional dating powerhouse with over a 110-people operation with presence in 6 countries. Over the years, we have focused all our energies and efforts on two core principles that have brought us to where we are today.

FIRST, we are committed, and we are here to stay in the love industry. Every single day, we are humbled by the impact that we have made on our customers' lives; the life journeys they have cultivated together, the family units they have formed and the children that came after. Despite the many challenges, it has been a meaningful, fruitful and mostly enjoyable career path for the both of us, knowing we have made a difference in people's lives.

SECOND, we believe in the power of technology to propel mankind to greater heights. To stay ahead, we must be in the forefront of technology. We could have been contented to stay in our high-margin offline business and make it into a lucrative "lifestyle business". Instead, we chose to continuously reinvest our profits into R&D and build new technology and new products. From developing one of the most comprehensive and powerful matchmaking CRMs which many other matchmakers have been modelling after to developing unique online dating products like esync.dating (the region's first hybrid dating service), LunchClick (the first app that focuses on being people from online to offline dates) and to acquiring comprehensive compatibility matching systems like Setipe (the largest serious online matchmaking site in Indonesia), we have always kept abreast of the next big trend and the latest technologies that we could leverage on.

The Blockchain and A.I. revolution has just begun. Even though it is still in its infancy, we know with certainty that this revolution would shake up many industries and businesses including ours. We believe that this would be the key to building a better dating and relationship industry. This revolution would also enable the crowd to share in the fruits of their contributions via Smart Contracts and spread the financial benefits to the many rather than being left in the hands of a few. A.I. technology often has a bad reputation; slated to putting millions of people out of job and potentially creating chaos. We are convicted that A.I. technology can be channelled to create love and promote better understanding for relationships.

We have a dream. Our dream is to transform the global dating and relationship landscape by restoring trust and transparency to it and helping billions of people create better lifetime relationships. We believe this can be done through Viola.AI. By being part of our project, you are helping us fulfil a dream to build a legacy via our project. By being part of our project, you are helping billions of singles and couples fulfil their dreams of finding love and happiness. We thank you for your consideration and your support.

Love,
Jamie and Violet
On behalf of the Viola.AI team