EtherInsure

Functional Requirements Specification

Executive Summary

Tenets of blockchain technology including disintermediation, transparency, trustless, automation and utilising smart contracts for customers to design their policies to suit their needs make insurance a viable candidate to convert to the blockchain. Blockchain with Distributed Ledger Technology working collaboratively can make financial institutions, in particular insurance, ideal companions to change the industry as we know it.

This FRS presents a business model for making insurance with less expensive premiums and faster processing of claims with greater security, with the core value proposition of reducing insurance fraud. Using pet insurance as the sector of insurance to make a gradual change for company's has been chosen, due to large companies not currently offering it and because it is an example of how easily the use of IoT and appendages to the blockchain will make it a sensible starting point for large companies to transition to a more secure network of insurance.

Initially the market segment chosen is pet insurance as this is an area that leads in well to the other areas of insurance such as home and contents, health, life, vehicle, boat, crop, and rental insurances. Pet insurance is seen as an easy method to start with as the smart contracts will give easy access to the product, and making claims will be straightforward with a marrying of the approved vets invoice with the claim being made by the client leading to a quick appendage of the blockchain and claims being serviced.

Section 1 – Overview

→ *Definition of the purpose of the blockchain network*

The purpose of blockchain pet insurance is to decrease insurance fraud by providing a platform that captures all transactions on the blockchain immutably and transparently. The immutable evidence will show a history of each client's policies, transactions, claims. It is also envisaged that the lower overheads from running the blockchain with Proof of Stake protocols by verified members who will be able to append transactions, will dramatically lower the cost of pet insurance for clients making the blockchain option a strong competitor in the market.

→ *Scope Statement that articulates the required outcomes, deliverables and limitations of the blockchain network*

The scope of the project is to give insurance companies the ability to record and track pet insurance policies and claims on a blockchain. This involves having a smart contract set up on a Dapp which can automate the processes traditionally provided by the customer service representatives via phone calls and provide real-time visibility into the status of one's pet insurance policies and claims.

Desired Outcomes:

- Improved efficiency and speed in the claims process, by allowing parties to access and update the claims process in real-time on a secure platform.
- Smart contracts to automate arbitration for claims disputes
- Increased transparency and accuracy in the recording of policy details and claims history, as the blockchain provides an immutable record of all transactions.
- Reduced costs for insurance companies, as the use of smart contracts and automation can streamline processes and reduce the need for manual labour.
- Enhanced security and reduced risk of fraud, as the decentralized nature of the blockchain makes it difficult for any single entity to alter or tamper with records.
- Improved customer experience, by providing policyholders with easy access to their policy information and claims history, and the ability to track the progress of their claims.
- Greater accessibility to insurance for underserved or underinsured populations, by enabling the creation of new insurance products and distribution channels.

Deliverables:

- Smart contracts that allow automation of the policy sign up, claims, arbitration.
- Help desk function with automated responses for commonly asked questions.
- A Dapp that makes signing up to the platform automated and individualised to each customer's needs with no need for talking to a customer service representative.
- Ratings and feedback systems to allow customers the ability to review their experiences and to provide feedback to the managers of the platform for positives and negatives.
- A payment platform for automatic payments and claim refunds.
- DAO that marries up the bills from veterinarians, pet owners policies, claims to automate claims refunds in a prompt manner.

To deliver these outcomes, the blockchain insurance platform will rely on less overheads than a traditional insurance company. No buildings, office spaces, car parking, computer hardware, reduced employees will be needed with smart contracts automating most traditional jobs in insurance. The reduction in these costs will be able to be passed onto customers' premiums.

Assumptions:

- That suitable blockchain technology is available for the project.
- That pet owners and insurance companies will be willing to adopt the use of the new blockchain technology
- That there is the ability to integrate the Ethereum blockchain with Polygon as a secondary scaling solution with other systems required.
- Access to large data sets and oracles are available to help set premiums.
- The legal and regulatory compliance of the blockchain system with relevant laws and regulations in the jurisdiction where it will be used.
- The scalability of the system to handle many users and transactions.

The risks associated with these assumptions will be mitigated using the Functional Requirements Specifications which will focus on the technical feasibility to ensure that the compatible systems can be used. The legal and regulatory risks will be worked upon with specialised lawyers in this field.

Scalability poses a risk in that if the business attracts many new customers then the system needs to perform at the same pace transaction and volume wise. The risk will be mitigated during testing by utilising a fast transaction blockchain with low transaction fees which will be Polygon.

Limitations

- The complexity/new technology of blockchain may make the process of purchasing and managing pet insurance policies more complex for consumers who are not familiar with how it works.
- Being a new technology, the regulation and use of blockchain technology in the insurance industry is still a new area and it is not yet completely clear how it will be regulated. This could create uncertainty for insurers and consumers alike.
- The cost of implementing and maintaining a blockchain system can be expensive, which could potentially be a deterrent for insurance company's.

The risks associated with the limitations involve education of the public. This will be done with direct marketing techniques of the business, online help platforms, sales and marketing personnel and info bots. A lot of the education would be done with working examples of the blockchain showing the benefits. As we would be competition with other existing systems the need to show the benefits and gains blockchain gives.

Costs of implementing and maintaining the blockchain system will be sought with Venture Capitalists. However, these costs would be less than maintenance of existing systems so although there would be some financial outgoing initially, the benefits of the blockchain system should be apparent.

Inclusions

Inclusions of functionality are:

- Smart contracts
- Dapp
- Search engines
- Rating systems
- Payment platform
- Ratings and feedback systems for customers
- System running as DAO

Exclusions

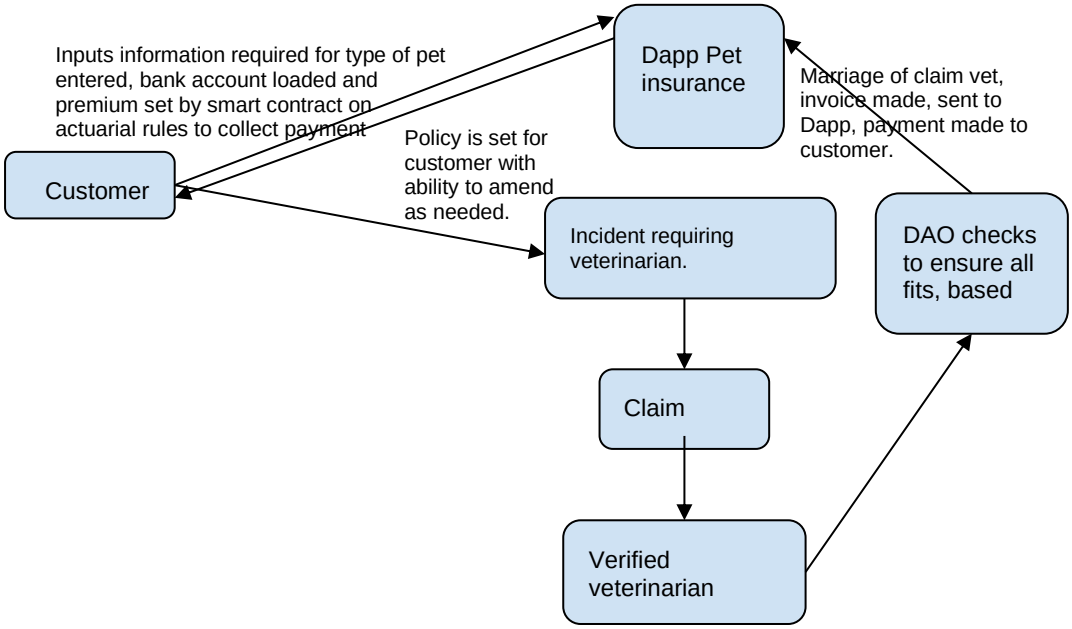
In this scope statement, the exclusions are the marketing, legislation and regulations, searching for new client's details. It is to be a partnership with insurance companies so the assumptions set out above are that the insurance company will already have the networks and clients required.

Section 2 – Feasibility

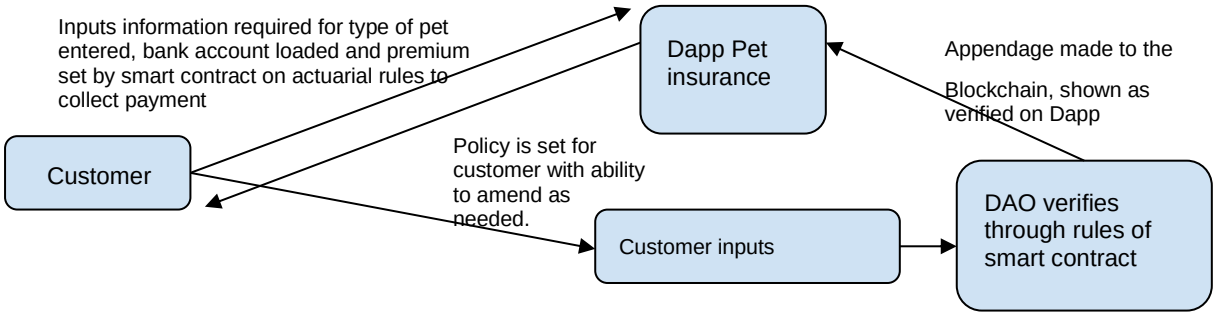
→ *Technical Feasibility Study*

The value propositions from the business case model are bullet pointed below. For each value proposition the process maps included show how the value will be delivered to the customer segments, including how the pet insurance services will go through the network to reach the customers. The key processes and activities that are required in the scope statement are included.

- Streamlined platform with decreased insurance fraud



- Cheaper and faster insurance quotes and claims



Using the diagram above, the platform would have automated rules followed by the smart contracts that would allow verification by the DAO and the rules set. Each pet's records would be on the blockchain and unable to be changed due to the blockchains security. When a quote or claim is made the information gathered would have a record of the pets history.

When the customer signs up for the insurance, there is an automated cost associated with their premium based on their information submitted on the smart contract, based on actuarial rules

already employed by the insurance company. The rules consider the type of pet, breed, age and location. Pre-existing conditions for diseases of the pets would need to be disclosed based on a trust system. Verified veterinarians would need to disclose whether treatment needed would be an existing condition. As the database grows, machine learning algorithms set premiums exact. Vaccinations would have to be on record and uploaded to the system.

• Security is a paramount consideration in the development of a blockchain-based pet insurance product. The system will handle sensitive customer data and financial transactions, necessitating robust security measures to protect both the company and its customers.

To address security concerns, the blockchain system will implement several measures designed to safeguard against hacking, data breaches, and other cyber threats. These measures include:

- Cryptographic Security: The DApp will employ cryptographic security to enhance protection against unauthorized access. Data on the blockchain will be encrypted using industry-standard algorithms such as Advanced Encryption Standards (AES) or Rivest, Shamir, Adleman encryption (RSA), making it extremely difficult and costly for malicious actors to decipher the encrypted data.
- Private Keys: Each user will be assigned a unique private key to sign transactions on the blockchain. This ensures that only authorized users with the corresponding private keys can access and interact with the data on the blockchain. The use of private keys adds an additional layer of security to prevent unauthorized access.
- Network Security: The blockchain network itself will be secured through the implementation of robust network security measures. These may include firewalls and intrusion detection systems to protect against external threats and unauthorized access attempts.
- Consensus Algorithm: The chosen consensus algorithm for this project is proof-of-stake (PoS). By adopting a secure consensus algorithm, the blockchain system becomes more resilient to attacks such as 51% attacks, where a single entity gains control over the majority of the network's computing power.
- By implementing these security measures, the blockchain-based pet insurance system aims to provide a high level of data protection and ensure the confidentiality, integrity, and availability of sensitive information. These measures will instill public confidence in the transparency and security of the system, mitigating concerns related to data breaches and cyber-attacks.

• Real life information with immutable history

The new experience for people with the blockchain experience will give them automated, up to date information on their policies and claims with changing premiums and quotes happening in real time, based on individual data. The retrospective actions taken by insurance companies now to increase premiums due to last years seasons would not be used, and real time processing of current data will help customers see their upcoming payment details. Customers will no longer need to be put on hold and wait to talk to customer service reps to set up policies taking hours.

• Token reward for no claim’s bonus, fraud protection using tokens on the DApp

Customers shown to have no claims each year will receive a reduced policy in the following year. Refunds via tokens (Matic).

Compatibility

Compatibility with existing systems will require the database of existing customers to be able to be taken to the blockchain, as well as integrating with the systems they already have in place. This is due to pet insurance often being a small part of the customers insurance products and they are likely to also have car insurance, home and contents insurance. By using a rewards token exchange it is hoped that as the insurance company advances, and the benefits are seen, the take up of other products will be used as well. Ensuring compatibility with necessary on chain and off chain systems is important because it will allow the set up and scalability of the blockchain-based system. It will also help to minimise the cost and effort required to implement the new system.

Scalability is an important consideration as the system will need to be able to handle a large number of transactions. The ability to handle an increasing number of transactions without experiencing any delays or performance issues will be extensively tested. One of the main value propositions of the system is for a streamlined platform and the advertising of this means that it will be imperative that there is no downtime, with the ability to keep up with high volume of transactions without delays. Testing of this would be made to ensure there is no negative impact on the users experience.

Our solution to scalability issues is to use a high-throughput blockchain platform. For this platform, Polygon is selected, which is designed to handle many transactions per second and uses PoS consensus. This also has role-based permissions which would be vital to add to the blockchain by people who know the job they are doing.

Another solution is to implement scaling solutions such as sharding, which allows the blockchain to be divided into smaller pieces called shards, each of which can process transactions independently. This can significantly increase the number of transactions that the blockchain can handle.

To evaluate the scalability of a blockchain system for a pet insurance product, the insurance company would need to consider the expected volume of transactions and determine whether the blockchain platform can handle this volume without experiencing any delays or performance issues. The company may also need to consider implementing scaling solutions to ensure that the system is able to handle an increasing number of transactions as the product grows in popularity.

→ *Economic Feasibility Study*

The economic feasibility of implementing a blockchain-based pet insurance system involves several cost factors and potential revenue streams. Key considerations include technology costs, ongoing maintenance expenses, training resources, and revenue generation.

Costs:

Technology costs encompass compatibility issues, scalability, programming, DApp development, and smart contracts to establish a Decentralized Autonomous Organization (DAO).

Hardware expenses, such as servers and storage devices, will depend on the system's size and complexity. However, costs are significantly lower than traditional companies, as hardware is provided for up to 2000 employees.

Software costs include blockchain platforms, additional tools, and applications. Priority is given to security software for data protection. Payment platforms, hosting, and internet connectivity entail initial setup costs, while ongoing maintenance costs are factored into premiums.

Key resources involve hiring and training talented individuals familiar with insurance systems and experienced in cloud technology. Training may include in-house resources or external trainers.

Revenue Streams:

Premiums from pet insurance clients would cover ongoing costs, and the premiums would be competitive compared to traditional models.

Commissions or fees paid by veterinarians or pet care providers for claims handling would contribute to revenue.

Subscription fees and new customer fees would be built into the revenue structure.

Benefits:

Automating claims and payment processes using blockchain technology can increase transparency and reduce administrative costs, potentially leading to lower premiums for customers.

The secure and tamper-proof nature of the blockchain system reduces the risk of fraud and instills trust in the insurance company.

Additional Considerations:

A lag between premium generation and claims coverage may require initial capital to cover outgoing claims.

Reinsurance costs, similar to traditional insurance practices, would cover major catastrophes or virus outbreaks in the pet insurance industry.

Overall, while there are initial costs associated with technology and ongoing maintenance, a blockchain-based pet insurance system offers economic benefits through increased efficiency, reduced administrative costs, enhanced customer trust, and lower premiums. The revenue streams from premiums, fees, and commissions contribute to covering ongoing expenses, making the system financially viable and competitive in the insurance market.

→ *Organisational Feasibility Study*

When it comes to evaluating the feasibility of using blockchain technology in the pet insurance industry, there are several factors to consider. As there are currently few companies in the industry using blockchain, there may be the need to find customers and partners familiar with the technology. This means having talented employees who can communicate the benefits of blockchain in a clear way, taking away the fear and mystery of the blockchain technology. The education of customers and partners of the benefits of the technology will require resources, in particular real-life examples of how it works and how quickly it can perform what is promised.

Training of workers would need an induction for trainees that puts them all on the same page. Most insurance companies are heavily scripted, with workers instructed on how to explain policy details, and what to say to certain questions. Smart contracts take away one to one conversations and put the policy holder in command of their own needs.

Regulatory and legal considerations will be built into existing insurance company's policy's. There would need to be a legal team with specific understanding of the blockchain technology to

ensure that there is no comeback on the company and potential lawsuits are negated. Particularly data protection laws, financial regulations, licenses, and approvals from regulatory bodies.

The value proposition in the business model of decreased premiums as it will function as DAO so salaries, costs of overheads are very low make up some of the organisational feasibility. A typical insurance company has over 2000 employees. Using smart contracts, Dapp, functioning as a DAO, that roles will be automated. The organisation would be taking away many customer service representatives, retention service people, salesmen and women. The lowering of staff numbers, and with workers not needing office space would drastically reduce the amount of overheads passed onto the customers.

Section 3 – Risk Analysis

→ *Technical Risks & Contingency*

Technical risks are largely focussed on ensuing the blockchain remains safe and secure, a major concern for many who are new to blockchain technology. Potential cyber-attack threats will be mitigated using robust security measures, including strong encryption, secure authentication protocols, and regular security audits to reduce the risk of a cyber-attack. To minimise the risk, the following steps are to be implemented:

- Strong encryption involving encrypting data using advanced algorithms to help protect it from unauthorised access and tampering.
- Implementing strong authentication protocols, such as multi-factor authentication, to help ensure that only authorized users have access to the system.
- Conducting regular security audits to help identify and address any vulnerabilities in the system before they can be exploited by attackers.
- Implementing network security measures, such as firewalls and intrusion prevention systems, can help protect the system from external threats.

Overall, implementing robust security measures reduces the risk of a cyber-attack on a blockchain pet insurance product and protects the system and data from unauthorized access and tampering.

In the event of a cyber-attack or a threat to the technical side of the blockchain the contingency plan involves:

- Regularly backing up data and having a plan in place for recovering data in the event of a system failure or cyber-attack to help minimize the impact of such an event. This would enable any faults or known attacks to be identified in a timely manner and previous version s of the system to be restored without the total loss of clients and the business information.
- Identifying potential issues that could arise, such as a system failure or cyber attack, and assessing the likelihood and impact of each risk.
- Response strategies for the event of a particular risk occurring, implementing a data backup and recovery plan in the event of a system failure.
- Establishing a communication plan for communicating with employees, customers, and other stakeholders in the event of an emergency to ensure that everyone is aware of what is happening and what steps are being taken to address the issue.
- Testing and updating the contingency plan with regularly testing and updating the contingency plan to ensure that it is still relevant and effective. This could involve

conducting drills or simulations to test the plan and identify any areas that need improvement.

→ *Economic Risks & Contingency*

Financial risks of blockchain pet insurance come from inability to attract enough customers, with inadequate revenue streams and changes in regulatory policies. To ensure adequate funding, the company will be partnering with established companies or organizations in the insurance industry to help mitigate financial risks and provide access to valuable resources and expertise. This also helps with compliance and regulations. It may be necessary to secure outside financing to fund the development and rollout of the product. This could be through traditional methods such as venture capital, or through crowdfunding or other alternative financing methods such as Angel investors.

Market risks affecting the economic feasibility of the system include changes in demand for pet insurance, changes in pet ownership trends, and changes in the competitive landscape with more companies adopting the technology. Market research into the demand for pet insurance products is part of the contingency plans so that changes in the landscape can be identified earlier. This will also help with diversification of revenue streams, with the overall plan to be starting with pet insurance, and through a gradual rollout looking to include other products such as crop, home and car insurance on the blockchain. Development of innovative products is also part of the contingency plan through the market research, to cater for the changing needs of pet owners.

→ *Organisational Risks & Contingency*

One of the biggest risks involving the scalability of the product, is not being able to find enough talented personnel. This comes from the talent pool of knowledgeable blockchain workers being shallow in a developing area. Using the sister companies standard operating procedures will help with this as well as ongoing training for personnel, identifying the talented employees and giving a progressive career to them. However with the goal of being a DAO, a lot of the work will be done by technical personnel to lower this risk.

Regulatory risks in a changing landscape may arise due to a lack of clarity on laws and regulations concerning blockchain insurance. The partner companies regulatory and compliance team would be working on this to adapt to the laws as they change, working closely with

regulatory bodies to ensure compliance with laws and regulations concerning blockchain technology and pet insurance.

The organization should establish contingency plans to respond to unexpected events that may affect blockchain pet insurance. This will include risk management plans, disaster recovery plans, business continuity plans, risk and crisis management plans. Many of these plans will be part of the sister companies plans already set up, however adapting them for the blockchain will be done thoroughly to identify, assess, and mitigate the risks associated with blockchain pet insurance.

Conducting market research to help identify potential demand for the product and identify any potential issues that may arise in the target market involve:

- Surveys to gather information from a large number of potential customers. Surveys can be conducted in person, by phone, or online, and can be used to gather a wide range of information, including demographics, purchasing habits, and attitudes towards the product.
- Focus groups involve bringing together a small group of people to discuss the product and provide feedback. This can be a useful way to gather in-depth insights and understand the motivations and concerns of potential customers. It will also be a way to identify talented employees and help them to progress in the company.
- Interviews conducted with individuals or with small groups, and can be used to gather more detailed information about a specific topic or issue.
- Online research via gathering information from websites, social media, and other online sources in order to understand the market and gather insights about potential customers.

Section 4 – Functional Requirements

→ *Functional Requirements Matrix – including:*

- *both functional and non-functional aspects*

	Functional (what system does)	**Non-functional (how system does it)**	**Priority**
Application Layer	The system will allow pet owners to register their pets.	Smart contract on the Dapp allows for automated registration.	High
	System allows pet owners to purchase insurance policies for their pets.	Software allows for secure and private details, gives the purchase price based on set actuarial rules, payment platform allows purchase securely.	High
	Veterinarians are able to submit claims on behalf of pet owners.	Vets are registered and able to access the blockchain to allow for submission of claims.	High
	System allows pet owners to submit claims for reimbursement.	Submission of claims is appended to the blockchain and when that marries up with the vets details the payment platform enacts the reimbursement.	High
	Pet owners are able to view their insurance policy information, including coverage limits, past history.	Blockchain provides immutable and real time history of customers policies and transaction histories.	Medium
	Pet owners can view their pets medical history.	All medical history is appended to the blockchain after being verified.	Medium
	Easy-to-use interface for pet owners, veterinarians, and insurance administrators.	Simple navigation of the user interface behind the security of 2FA and using traditional security measures as firewalls.	Medium
Implement ation Layer	Smart contracts used to enforce policies terms and conditions.	Smart contract automates the if…then management of a contract and when pre-loaded policies and terms are breached then a warning is sent. For example a payment is missed, policy automatically paused and reminders automatically sent.	High
	The system is scalable to handle many pet owners policies and enquiries	Use of IOS or similar blockchain with fast transaction speed and low gas rates to scale up as popularity grows.	Medium
	Privacy and confidentiality is maintained for all clients.	2FA and access to policies is done via the blockchain with immutable appendages made behind secure firewalls.	High

	User login and ability to set own profile.	2FA used to access ones policies. Once logged in the individualised account is shown and able to be changed by the user.	High
	Pet insurance premium payments.	Secure payment in fiat or crypto available for monthly/yearly subscriptions on platform provided on blockchain.	High
	Complete and auditable trail of all transactions and interactions.	Each change to policy/pet insurance history is appended to the blockchain by verified workers.	High
	Availability of Dapp whenever needed.	Dapp gives 24/7 coverage with back up of data if an issue arises.	High
	Performance of blockchain is fast.	High speed blockchains used that can cope with high volume.	Medium
	Generation of policy certificate	Email of policy certificate to welcome new clients sent automatically.	Low
	Interaction with other social media platforms.	The usual links and ability to post on social media, as well as to use for advertising.	Low

Section 5 – User Interface

'User Stories' for each functional requirement

Functional Requirements	**User stories.**
APPLICATION LAYER	
The system will allow pet owners to register their pets.	I want to be able to use the smart contract to enter specific information for my pet.
System allows pet owners to purchase insurance policies for their pets.	To be able to view my transaction history on the blockchain, so that I can track my financial activity.
Veterinarians are able to submit claims on behalf of pet owners.	To be able to easily initiate transactions on the blockchain, so that I can quickly and easily send and receive funds.
System allows pet owners to submit claims for reimbursement and are automated, including arbitration.	I want to be able to submit claims quickly and easily, and receive my reimbursement efficiently.
Pet owners are able to view their insurance policy information, including coverage limits, past history.	I want to see all records of interactions with my pet insurance in a secure and immutable way.
Pet owners can view their pets medical history.	I want to see all records of my pets medical history.
Easy-to-use interface for pet owners, veterinarians, and insurance administrators.	To have a clear and intuitive user interface, so that I can easily navigate the various features and functionality of the blockchain.
IMPLEMENTATION LAYER	
Smart contracts used to enforce policies terms and conditions.	To be able to access and interact with smart contracts, such as deploying and calling smart contracts.
The system is scalable to handle many pet owners policies and enquiries	I want to be able to access my policies and make enquiries in a timely manner.
Privacy and confidentiality is maintained for all clients.	To be able to easily access and manage my private keys and other sensitive information, so that I can securely access my funds and transactions.
User login and ability to set own profile.	To be able to customize my settings and preferences, such as setting gas prices, and manage my wallet
Pet insurance premium payments.	To be able to easily exchange my cryptocurrency for fiat currency, or other cryptocurrency.
Complete and auditable trail of all transactions and interactions.	To be able to see all my past history of transactions and know that they are recorded safely and truly.

Availability of Dapp whenever needed.	I want to be able to access my policy whenever and wherever from whatever device.
Performance of blockchain is fast.	I don’t want a lot of lag time, I want each transaction processed as quickly as the internet performs.
Generation of policy certificate	I want to have a physical document (via email attachment) that I can have separate to the Dapp to know I have the policy.
Interaction with other social media platforms.	I want the platform to integrate with social media

Section 6 – FRS Alignment Review

→ *Business Model Map – A matrix that maps the blockchain network functionality to the Key Results Areas (KRAs) within the Business Model*

Business Model Element	**Canvas Description**	**KRA**	**Functional Aspect**	**Non-Functional Aspect**
1. Value Propositions	Streamlined platform with decreased insurance fraud	Accessing the platform	System allows pet owners to register their pets	Smart contract on Dapp allows for automated registration.
	Cheaper and faster insurance quotes and claims	Operational efficiency	Payment system on user interface allows pet owners to purchase insurance policies for their pets.	Software allows for secure and private details, purchase price based on set actuarial rules.
	High security	No disruption to operations, threats are nullified.	Privacy and confidentiality is maintained for all clients.	2FA and access to policies is done via blockchain with immutable appendages made behind secure logins.
	Token reward for no claim's bonus	Payment platform	Clients with no claims in year are reimbursed via crypto or fiat.	Smart contract automates no claims by set date.
	Real life information with immutable history	User interface	Clients can access their up to date information 24/7	Simple menu selection from login.
	Convenience	Accessing the platform	24/7 uptime from anywhere.	Clients have 24/7 access
	New experience	User interface	Clients are able to individualise the policy they need	Simple menu selection from login and client profile.

2. Channels	Website	Client portal	Insurance application function with pet owners information.	2FA used to access clients policies. All information appended to blockchain.
	Dapp	Accessing the platform	Clients and vets have 24/7 access to the platform	Simple menu selection when searching
	Telecommunications network	Ratings system from clients.	Feedback collected from surveys and ratings of customer service	Clients select ratings from selected questions.
	Marketing channels	Marketing	Offline activity	
	Offline Channels	Intranet	DApp to integrate with intranet for feedback on systems performance	Data collected and collated from ledger of App
3. Customer Relationships	Rating system	Client ratings including veterinarians	Clients and vets can rate their experience	Clients and vets can select from selected questions their ratings.
	Feedback forms	Client ratings including veterinarians	Clients and vets can rate their experience	Clients and vets can select from selected questions their ratings.
	Ongoing relationships with pet owners	Retention numbers recorded	Database holding number of repeat clients/cancellations	Emails and marketing providing updates on costs and upcoming deals
	Veterinarians	Registered vets	Vets provided with customers	Screened vets are made available to clients in areas closest to them.
	Help desk	Marketing	Off line activity.	

	Chat bot	Help desk automated to fit most questions.	Clients and vets can get help from the bot for frequently asked questions.	Questions are preloaded with collected FAQ and responses preloaded.
4. Revenue Streams	Premiums	Pricing	App to calculate cost of premium for each pet	App to display costs to clients.
	Commissions for claims	Pricing	App automatically provides vets with a payback when marriage of clients claims and vets	App waits for both client and vets claim information to be appended then pays vet.
	Subscription fees	Pricing	Vets are charged a fee to be registered with the insurance company	App charges new vets a fee
	New customer fees	Pricing	To start the relationship a setting up fee is included in initial price.	App displays the breakdown of costs with new customer fee.
5. Key Partners	Insurers	Legislation and regulatory	Sister company to help promote new tech to clients	Sister company integrates with blockchain
	Reinsurers	User interface	DApp provides reinsurers with information on company	Rate of reinsurance paid through Dapp
	Tech partners	Platform	Platform is scalable and can handle many pet owners policies and enquiries	Use of IOS or similar blockchain with fast transaction speed and low gas rates to scale us as popularity grows.

	Smart contract developers	Platform	Smart contracts used to enforce policies terms and conditions	Smart contract automates policy and claims process.
	Platform developers	Platform	Privacy and confidentiality maintained for all clients	2FA and access to policies is done with immutable and high cryptography of blockchain
6. Key Resources	Smart contracts	User Interface	Smart contracts used to enforce policies terms and conditions	Smart contract automates policy and claims process.
	Interactive platform	User Interface	Simple menu selection available 24/7 uptime from anywhere.	Clients have 24/7 access
	DApp	User Interface	Simple menu selection available 24/7 uptime from anywhere.	Clients have 24/7 access
	Technology infrastructure	Platform	Platform is scalable and can handle many pet owners policies and enquiries	Use of IOS or similar blockchain with fast transaction speed and low gas rates to scale us as popularity grows.
	Payment platform	User interface	Customers make all payments and receive claims through Dapps payment system	Confidentially makes and sends payments to customers and vets
	Computers	Employees portal	Employees can make and be paid for	Employees use their own computers

			appending to the blockchain	have required specs to perform operations
7. Key Activities	DAA	Platform	Platform runs automatically	Collects information and data is processed to calculate premiums
	Advertising	Marketing	Off line activity	
	Help desk	Marketing	Off line activity	
	Platform development	Platform	Staging platform for technology development, testing and maintenance	Version control protocols.
8. Cost structure	Salaries	Finance	Offline activity	
	Technology	Platform	Track data usage	
	Maintenance	Finance	Offline activity	
	Claims	Finance	Automate claims payouts after marriage of vets claim advice	Simple bank transfer of claim amount
	Marketing	Off line activity		
	Developers	Platform	Apply network monitoring tools	Service agreements to address all functional aspects of the plafform operation
	Programming	Platform	Apply network monitoring tools	Service agreements to address all functional aspects of the plafform operation
	Customer support	Finance	Off line activity	