The Implementation of Blockchain Technology in the Travel Insurance Industry: Case Studies of Fizzy and Etherisc

Abstract

Blockchain technology is receiving increasing interest in the travel insurance industry. It is considered a revolutionary technology that could solve problems and inefficiencies in traditional insurance models, which can be time-consuming, inefficient, and subject to errors. Blockchain-based platforms offer greater transparency, efficiency, and security, critical aspects of the travel insurance industry. This paper explores the possibilities when the said technology is implemented in the travel insurance industry. Two specific use cases of blockchain-based smart contract technologies are presented: Fizzy and Etherisc. On the one hand, Fizzy is an example of a failed use case for blockchain adoption in the travel insurance industry, while Etherisc is an example of a case that has been successful. The two cases are analysed using the SWOT framework, identifying the strengths and weaknesses of the two projects and the opportunities and threats this market presents. Comparing these two cases shows that adopting blockchain technology has great potential to disrupt the market. There are several opportunities, such as lowering the costs, gaining customer trust, and lowering the error potential. However, obstacles must be faced to profit from these opportunities.

Table of Contents

Abbreviations

DAO	Decentralized Autonomous Organization
DLT	Distributed Ledger Technology
Insurtech	The term refers to the use of technology innovations in insurance.
P2P	Peer-to-Peer
SWOT	Strengths-Weaknesses-Opportunities-Threats

List of Tables

1. Introduction

Blockchain technology has gained immense attraction in recent years with applications ranging from financial services to healthcare. Yu and Yen (2018) observed that the insurance industry seems the only one to pick up this new technology. This paper focuses on the flight insurance industry, where blockchain technology can automate verifying claims, ensuring they are valid, and quickly paying out claims. It can also give travellers access to more transparent and secure documentation, which can help limit the time it takes to dispute a claim. The advantages of incorporating blockchain into flight delay insurance are numerous, and both travellers and providers can benefit from a more efficient and reliable insurance experience. Although blockchain-based insurance offers promising opportunities, there are hurdles to tackle before it can be considered a complete success. A common problem in travel insurance is the agony of pursuing a claim. The process often takes a long time and might be dropped entirely for reasons unknown to the customer. Conversely, fraudulent claims cost travel insurers money (Kapadiya et al., 2022).

Our hypothesis states that implementing blockchain technology in the flight delay insurance industry can significantly disrupt traditional insurance models and create new opportunities for innovative products and services. This report introduces two cases of industry pioneers and presents the findings, core strategies, and obstacles by applying a SWOT analysis. The results of this report are aimed at potential newcomers to the flight insurance industry or existing insurers that wish to expand their market share by increasing their product range or entering new markets.

Plenty of literature discusses possible fields for implementing blockchain (Shetty et al., 2022). Most research focuses on the different industries and products, but a comparison of the two companies – Fizzy and Etherisc - operating in the flight insurance industry does not yet exist. This study addresses this gap by examining the competition and identifying this promising industry's actions to meet its potential.

This report starts by performing literature research to fully comprehend blockchain technology, its features, and the travel insurance sector's difficulties. Furthermore, the advantages and disadvantages of blockchain technology in the insurance industry are discussed. After setting the foundation, a SWOT analysis for both use cases is performed and explained. Finally, the results are compared and discussed. The restrictions and limitations proceed with the findings.

2. Literature Review

This section gives a comprehensive overview of the current knowledge on using blockchain technology in the travel insurance industry. An introduction to the concept of blockchain technology and its key characteristics is given. This provides a foundation for understanding how blockchain technology can be applied to the travel insurance industry. Next, an overview of the travel insurance industry and the challenges insurers face in providing these services are presented. Lastly, blockchain technology's potential benefits and drawbacks in travel insurance are discussed.

2.1 Blockchain Technology and its Characteristics

Distributed ledger technology (DLT) is a system that allows value transactions to take place on a peer-to-peer (P2P) network without the need for a central authority to function as an intermediary (Li & Kassem, 2021). Popovic et al. (2020) claim that blockchain is the most promising distributed ledger technology and should be considered a subset of DLT.

At its most basic, blockchain is a database that many users share, where each participant can verify, distribute, and store data. It distinguishes itself from earlier technology as it offers a single source of truth, meaning there is a shared and immutable record of all transactions stored on the blockchain (Popovic et al., 2020). As blockchain technology offers a way to openly record and disseminate transaction information on a peer-to-peer network of computers, databases are distributed according to the idea that each copy of newly added data is given to every user in the system, referred to as a node (Nguyen & A, 2018). Decentralisation, transparency, immutability, anonymity, and traceability are the fundamental properties of a blockchain system, according to Gao et al. (2020).

Like software that operates on a computer platform, self-executing code distributed on the blockchain is referred to as a smart contract, i.e., computer protocol using the blockchain to digitally facilitate, verify, and execute agreements between two or more parties (Li & Kassem, 2021). As Wang et al. (2019) have emphasised, a smart contract will have its source code published and verified on the blockchain, making it impervious to tampering. Their study revealed that without centralised control and the coordination of outside authorities, the execution of a smart contract is enforced among anonymous, trustless individual nodes. To guarantee the security of the blockchain network, smart contracts are immutable, meaning that once they are deployed to the blockchain, their code cannot be changed (Zheng et al., 2020).

Since smart contracts operate in a decentralised environment, they may need to access external information unavailable on the blockchain. One common approach to incorporating external information, e.g., real-time flight data, into smart contracts is through trusted data feeds called oracles. (Wang et al., 2019). Al-Breiki et al. (2020) explain that oracles are the link between the real world and the smart contract. Their primary job is to collect and provide data feeds and input to smart contracts. If only one oracle is used, the centralisation problem is again present. That means there is a higher risk of using malicious or incorrect data.

According to Popovic et al. (2020), the automated execution of a legal contract or agreement might be implemented using them, even if they might not technically be considered "contracts" in the traditional sense. The research also indicates that although self-executing code is nothing new, smart contracts enable business logic automation, minimise operational frictions and expenses, and increase business process efficiency.

Popovic et al. (2020) argue that throughout the whole insurance value chain, from product underwriting to claims processing, blockchain technology has the potential to be used in a variety of insurance-related applications, and it may act as a facilitator for accelerating digitisation, changing people's perspectives on change and transition, and creating more innovative products.

2.2 The Travel Insurance Industry and its Challenges

Travel insurance covers a range of risks, such as trip cancellation, baggage loss, medical emergencies, and flight delays or cancellations (Leggat et al., 1999). A regular insurance plan covers specific losses or damages a traveller may incur. More specifically, travellers purchase coverage before they embark on their trip. The cost of the insurance premium depends on several factors. If an unexpected event occurs during the journey covered by the insurance policy, travellers can file a claim to receive reimbursement for their losses.

Significant challenges in the travel insurance industry are the increasing insurance demand and claim processing costs (Sehgal, 2017). Insurance policies require the customer to navigate a compound claim process and submit sustainable documentation to receive compensation for the covered events. This leads to long waiting times and uncertainty regarding the compensation amount for the customer, thus lowering customer satisfaction. Furthermore, insurers must accommodate the ever-changing needs of the customers. According to Leggat and Leggat (2006), this has an even more significant effect when travellers deal with the inconveniences of flight delays.

Finally, the travel industry faces challenges from within the industry itself. Competition among insurance companies is fierce, and new players will try to enter or disrupt the market. As the demand for new insurance products is increasing and technology is disrupting the insurance industry, travel insurance providers must be able to implement new strategies by innovating and adapting to the changing landscape (Kalsgonda & Kulkarni, 2022). Insurers can adapt to the evolving terrain by adopting blockchain technology and developing new products like parametric insurance.

2.3 Potential Benefits and Drawbacks of Blockchain Technology in Travel Insurance

Blockchain technology has the potential to address many of the challenges which the travel insurance industry is facing. Particularly the ones addressed above, high claims processing costs, low customer satisfaction rates, and the need to adapt to changing customer needs and preferences.

Blockchain technology enhances transparency and trust due to the characteristics of the blockchain of having a transparent and immutable record of all transactions stored on it. Travel insurance providers can streamline the claims process using smart contracts on the blockchain. Due to the nature of smart contracts, they automatically verify claims based on predefined criteria. Paying out claims is sped up due to the now redundant human intervention (Gatteschi et al., 2018a). Kar and Navin (2021) point out that the insured can receive real-time updates on their claims, improving customer satisfaction. Furthermore, insurance policies can be personalised by creating customised, usage-based insurance tailored to the individual needs of a traveller (Gatteschi et al., 2018a). Lastly, with the tamper-proof system of blockchain, Gatteschi et al. (2018b) suggest that the fraud risk can be reduced and security improved.

Blockchain technology is complex and needs specialised experts to implement and use. This can be a constraint for smaller insurance companies because of the investment in technology and personnel. Lu (2019) claims blockchain technology's scalability is a big issue. This could be a challenge for large volumes of travel insurance claims, as Wang et al. (2019) identified that it might cause a slowdown in processing and rising transaction costs. These factors could lead to customer dissatisfaction. Furthermore, more regulatory frameworks and standards for blockchain in the insurance industry need to be established. Finally, Grima et al. (2020) claim that integrating this new technology within the existing insurance system can be challenging.

3. Case Description

The first company to be discussed is Fizzy, an online platform for buying and selling insurance policies developed by AXA, a French insurance giant. Fizzy was a web-based tool that allowed customers to compare different insurance products and purchase coverage easily. It used artificial intelligence and machine learning technologies to match customers with the best insurance product for their needs. Furthermore, it provided customers with real-time notifications and updates on their policy status, allowing them to make better decisions. Fizzy offered flight coverage between Paris, Charles-de-Gaulle, and the United States.

The second use case to be discussed is Etherisc, a blockchain-based platform developed by a startup of the same name. Etherisc facilitates the management of digital assets and represents a significant innovation in the financial services industry. It allows customers to store, trade, and transfer digital assets in a secure, decentralised manner. The platform also provides tools and services to enable users to manage their digital assets efficiently. Etherisc offers enhanced security features such as two-factor authentication, encryption, and tokenisation.

3.1 Fizzy

Launched in 2017, Fizzy was an insurance offering by AXA, a French multinational insurance company utilising the Ethereum blockchain to cover flight delays. Fizzy used the Ethereum blockchain to provide smart contract-based flight coverage. The claim process was automated using a smart contract, and the need for manual intervention and the risk of fraud could be reduced. This provided a seamless and efficient insurance experience (Hoffmann, 2020).

Fizzy offered coverage for flight delays exceeding two hours. This service addresses the common problem of flight delays, which can cause significant inconvenience and financial losses for travellers (AXA, 2017).

After two years of operation, Fizzy was shut down by its parent company AXA despite its brilliant idea and innovative approach. The closure was due to the platform's inability to reach its commercial targets, reveals Hoffmann (2020), which ultimately made it an unprofitable venture for the company. This may have been due to various factors, including competition from established insurance providers, limited awareness among potential customers, or challenges in scaling the business.

Fizzy's experience demonstrates the difficulties of bringing new and innovative concepts to market, especially in established sectors. It emphasises the need for meticulous planning, market research, and execution for the success of any new enterprise.

3.2 Etherisc

Etherisc is a decentralised and open-source insurance platform that uses blockchain technology to provide transparent and automated insurance products. The vision and technical architecture of the platform are outlined in their whitepaper, focusing on leveraging blockchain technology to minimise inefficiencies and costs in the insurance industry by creating a decentralised insurance marketplace. (Bernstein et al., 2022)

Etherisc collaborates with independent developers to create and offer smart-contract-based insurance products. The platform is constructed on the Ethereum blockchain and aims to automate the entire insurance process, from policy creation to claims settlement. The platform's use of risk pooling pools is a noteworthy feature that allows policyholders to pool their risk and share the cost of claims, creating a more equitable and efficient insurance market, particularly for underserved communities that may have difficulty obtaining traditional insurance products. (Bernstein et al., 2022)

Bernstein et al. (2022) state that the Etherisc platform offers users to obtain a flight delay insurance policy by entering information about their travel and paying the premium. The policy is a smart contract registered on the Ethereum blockchain that is automatically triggered if an aircraft is delayed as specified in the policy.

The previous solutions for smart contract applications in the insurance industry have been analysed, and there are distinct differences between the approaches taken by Etherisc and Fizzy. Hoffmann (2020) points out that Etherisc aims to completely disrupt the market and create a decentralised platform that allows anyone to build an insurance product but faces challenges in establishing trust and developing a customer base.

4. Methodology

The methodology section describes the research methods and procedures to test the hypothesis. First, the overall research design of the study is introduced. Next, the sampling strategy explains why the two cases were selected and why they are relevant to the research. Chapter 4.3 describes the data sources that were considered. Then, it is explained how the collected data is analysed. Lastly, some limitations and assumptions that may affect the validity and reliability of this study are addressed.

4.1 Research Design

This qualitative study's research design examined two use cases for blockchain adoption in the flight delay insurance sector: Fizzy and Etherisc. Each use case underwent a SWOT analysis, a simple framework that points to the importance of both external and internal factors in understanding its unique strengths, weaknesses, opportunities, and threats (Barney, 1995). The outcomes of these investigations were contrasted with shedding light on the elements that influence whether blockchain adoption in this sector is successful or not.

4.2 Sampling Strategy

The cases of Fizzy and Etherisc were selected for this study based on their relevance to the hypothesis. The Fizzy case was chosen for this study as it is an example of a use case that was unsuccessful in adopting blockchain technology in the flight delay industry. This case was important to analyse because it provided insights into the challenges and limitations of adopting blockchain technology in this industry. On the other hand, Etherisc was selected because it is still in use and has shown the potential to disrupt traditional insurance models. This case was important to analyse because it provided insights into the potential benefits and opportunities of adopting blockchain technology in the flight delay insurance industry. Comparing these two cases helped to better understand the factors contributing to blockchain adoption's success or failure in this industry.

The sampling strategy for this study was designed to assess the application of blockchain technology in the flight delay insurance business, emphasising the examples of Fizzy and Etherisc. This project's primary data collection method was examining secondary sources. The sources included journal articles, company reports, and other publicly available data sources. The obtained information enabled a thorough inspection of the factors affecting whether blockchain adoption in this industry is flourishing.

4.3 Data Analysis

Using the SWOT analysis methods, the internal and external environment of Fizzy and Etherisc were analysed to assess their strategies. The methodology employed for this analysis involved gathering data and information to identify each project's strengths, weaknesses, opportunities, and

threats. Strengths and weaknesses refer to the internal environment, thus aspects related to the project itself, while opportunities and risks, on the other hand, are related to the external environment; they are factors that can positively or negatively influence the project (Houben et al., 1999).

4.4 Limitations and Assumptions

One concern for this study is using secondary sources for data collection. While the selected sources gave an overview of two different blockchain adoption use cases in the flight delay insurance market, the lack of primary data may have restricted the depth of the investigation.

Another drawback is that only two use cases were chosen for examination. While these examples gave helpful insight into the usage of blockchain technology in the flight delay insurance sector, they may not have reflected the whole industry.

Furthermore, this study assumes that the characteristics influencing blockchain adoption in the flight delay insurance business are constant across different geographies and settings. Differences in regulatory regimes, cultural norms, and other variables, on the other hand, could have impacted the results.

5. Findings

This section presents the results derived from the SWOT analysis of the Fizzy and Etherisc projects. Specifically, the internal environment is explored by selecting the strengths and weaknesses of the projects and the external environment by identifying the opportunities and challenges that the market exhibits. Furthermore, the two projects are compared, evaluating two strategic positions operating in the same industry.

5.1 SWOT Analysis Fizzy

Some crucial strengths of blockchain adoption in the flight delay insurance business were identified through the SWOT analysis. Firstly, as it is stated by Popovic et al. (2020), blockchain technology delivers a unique solution that increases consumer security, transparency, and confidence. This can serve to boost industry confidence and raise adoption rates. Second, blockchain technology allows insurers to deliver fast, efficient and tailored services to their customers (Kar & Navin, 2021). Fizzy's customer-centric strategy prioritised consumers' demands, making the claim process more user-friendly and increasing customer satisfaction and loyalty. Lastly, Fizzy benefited from being a subsidiary of AXA, a well-known brand with a solid reputation in the insurance business. This lent credibility and aided in the development of client trust.

Furthermore, the SWOT analysis identified several flaws within Fizzy. For instance, Fizzy's coverage is restricted to flight delays and cancellations, which limits its scope in contrast to conventional insurance companies that provide travel insurance plans encompassing a broader range of events such as baggage loss, illness, and natural disasters.

Moreover, according to Hoffmann (2020), its repayment system could have been more efficient than other blockchain-based solutions, taking up to seven days for Fizzy's client to receive payment. Besides that, blockchain solutions within insurance, as a relatively new offering in the market, need more awareness among potential customers, which may have hindered its growth (Grima et al., 2020). Additionally, Fizzy may have received fewer resources and attention than AXA's core company because it was an experimental product produced as part of AXA's innovation activities. This might have impeded its capacity to grow and reach a larger market.

Some unique opportunities that could have helped the company expand and grow are given through the limited competition in the market for blockchain-based flight delay insurance. Fizzy could have established itself as a leader in this emerging market, which could have led to increased demand and revenue. Additionally, Fizzy could have increased its market share in the flight delay insurance sector by offering more coverage options and expanding its reach to more countries. Another opportunity could have been to establish partnerships with airlines, travel agencies, or other companies in the travel industry. By working together, Fizzy could have leveraged the partner's customer base and gained new customers.

Conversely, since the industry is not yet fully established, various threats potentially hindered Fizzy's success. Legal and regulatory challenges may have arisen due to the use of blockchain technology and the need for compliance with different laws in different countries (European Insurance and Occupational Pensions Authority, 2021). Finally, there could have been a negative perception of blockchain technology due to its association with cryptocurrencies and their sometimes-controversial uses. This could have led to a lack of trust and reluctance from potential customers to use Fizzy's blockchain-based flight delay insurance products. Table 1 shows the results of the SWOT analysis.

Table 1

SWOT Analysis Fizzy

	Positive	**Negative**
Internal Factors	STRENGTHS ▪ Innovative ▪ Custom centric ▪ Strong brand	WEAKNESSES ▪ Limited coverage ▪ Limited awareness ▪ Experimental product
External Factors	OPPORTUNITIES ▪ Only a few competitors ▪ Increase market share ▪ Partnerships with companies in the industry	THREATS ▪ Industry not established yet ▪ Legal and regulatory challenges ▪ Negative perception through association with cryptocurrencies

Note: Own work.

5.2 SWOT Analysis Etherisc

Etherisc has several strengths that make it a potentially competitive flight delay insurance industry player. One of its major strengths is the fast and efficient claims process and payment, which provides customers with a seamless experience. In addition, Bernstein et al. (2022) state that Etherisc offers comprehensive coverage beyond travel insurance, including coverage for medical emergencies and crop insurance. This key differentiator sets it apart from other flight delay insurance providers. Another strength of Etherisc emphasised by Bernstein et al. (2022) is its collaboration with companies in different industries, such as Chainlink, Aon, and Oxfam, which has helped to

enhance its reputation and credibility in the market. Overall, these strengths position Etherisc as a strong player in the travel insurance industry.

Despite its strengths, Etherisc also faces several weaknesses that could hinder its success in the travel insurance industry. The platform's vulnerability to security threats, such as hacking, could erode customer trust and result in financial losses. Additionally, limited awareness of Etherisc as a new offering could make it difficult for the platform to gain market share against more established travel insurance providers. Finally, some potential customers may need clarification on the platform's complex blockchain technology, which could impede adoption.

Etherisc has several opportunities to expand its business and increase its market share in the travel insurance industry. The company could form new partnerships with other blockchain-based companies or travel agencies, potentially leading to increased brand awareness and customer acquisition. Expanding its business to more countries could increase its market share and revenue. Etherisc could also leverage its expertise in blockchain-based insurance to expand into other areas of insurance, such as property or life insurance, further diversifying its revenue streams and mitigating risk. By taking advantage of these opportunities, Etherisc could establish itself as a leader in the blockchain-based insurance industry and create a sustainable competitive advantage.

Despite the strengths of Etherisc, there are also some potential threats to its success in the market. One of the main threats is the competition from both traditional insurance companies and emerging insurtech companies. Etherisc must continue innovating and differentiating to stand out in a crowded market. Another potential threat is legal and regulatory challenges, as the regulatory landscape for blockchain technology and insurance is still developing (European Insurance and Occupational Pensions Authority, 2021). Etherisc must ensure it complies with all relevant regulations and legal requirements to avoid any legal issues that could negatively impact its business.

Additionally, some customers may negatively perceive blockchain technology due to its association with cryptocurrencies, which could create a barrier to adopting Etherisc's offerings. To mitigate this threat, Etherisc must continue educating consumers on the benefits and security of blockchain technology in the insurance industry. Table 2 on the next page shows the results of the SWOT analysis.

Table 2

SWOT Analysis Etherisc

	Positive	Negative
Internal Factors	STRENGTHS ▪ Fast and efficient claims process ▪ Comprehensive coverage ▪ Collaboration with Chainlink, Aon, Oxfam	WEAKNESSES ▪ Vulnerable to security threats ▪ Limited awareness ▪ Possible scepticism due to the complexity of the technology
External Factors	OPPORTUNITIES ▪ New partnerships ▪ Expansion to other countries ▪ Expansion to other insurance areas	THREATS ▪ Competitors beyond travel insurance ▪ Legal and regulatory challenges ▪ Negative perception through association with cryptocurrencies

Note: Own work.

5.3 Comparison

Both, Fizzy and Etherisc offered innovative products with the potential to disrupt the traditional flight delay insurance market. Using smart contracts allows them to automate the insurance process and provide faster refund procedures than standard travel policies. However, some differences emerged from the analysis.

First, the two companies differ in the type of project. Etherisc is a decentralised platform that offers flexibility to insurance providers to create customised policies. Fizzy focused on providing a more straightforward and transparent claims process than the traditional market. The variety of product offerings by the two companies is different. Etherisc offers coverage throughout multiple insurance sectors, including an entire ecosystem for others to use. In contrast, Fizzy had one single product.

Another aspect to consider is that Fizzy was part of AXA, a well-known brand in the travel insurance industry with a high reputation in terms of quality and reliability. However, Fizzy may have received different resources and attention than AXA's core business, impacting its growth and success. Moreover, Fizzy needed help finding a suitable distribution channel, compromising the possibility of getting prospective customers to discover and give access to the new product. There is a need for a tech company that can provide knowledge to existing insurance companies,

leveraging their brand name and addressing trust issues. Hoffmann (2020) believes that this business model has the potential to succeed in the insurance market.

In contrast, Etherisc is a relatively new player in the insurance industry, and market penetration is more complex than it is for Fizzy. However, Etherisc has developed and created essential partnerships, bringing it visibility and the possibility to expand the business. However, a significant presence in the market depends mainly on success and openness regarding the adoption of blockchain technology by the public.

Regarding opportunities, both companies operate(d) in an emerging market with an increasing demand for more efficient and innovative insurance products. Therefore, expanding the business to other countries offers an opportunity to increase the market share. Etherisc also can expand its business to other insurance sectors beyond travel. Fizzy's potential could have been to explore partnerships within the travel industry to increase its reach and customer base in the travel insurance sector.

Both projects have faced threats, such as regulatory uncertainty and potential legal challenges, that could have posed a risk to the adoption and growth of their products. In addition, the adoption of blockchain technology could be negatively perceived and resisted by customers due to its association with cryptocurrencies. Both companies have faced competition, but Etherisc faces stiff competition from established insurance companies with strong brands and customer bases.

6. Discussion

Both Companies are affected by the same main threats, some of which are detrimental to forecasting the future of blockchain-based insurance. One of the most important ones is that most countries still develop legal frameworks. Meyer and Schuppli (2017) state that if the smart contracts used in these insurance cases show identical characteristics to traditional insurance, there should be no issues adapting the regulatory system, at least in Switzerland. Moreover, they argue that discrepancies between the two will be the problem.

Most countries are still creating regulations for blockchain, and they are doing it at a different pace. This could lead to a customer buying insurance in a country where smart contracts are legally binding, but the insurer is located somewhere where it is not. In this scenario, how the case is handled in the event of misconduct by one party remains to be determined. Even if the contract is legally binding for both parties, different regulations might lead to different penalties for misconduct.

A reason for adapting blockchain-based insurance products is the opportunity to tap into new and often underserved communities, as it is suggested by Shetty et al. (2022). Moreover, offering an ecosystem to create specific insurance plans demanded by the local communities allows the insurer to obtain new customers. This ecosystem enables new competitors to enter the market, which can both be a threat and an opportunity. More competition usually comes with the need to fight for the customers, which leads to new, more attractive products that succeed. Indeed, it is demonstrated by Bousney and Knudsen (2022) that by having more competitors, price competition is inevitable, which leads to lower prices, better quality service, and more variety and innovation.

The very nature of blockchain, with its immutability and traceability, creates an environment where both the insurer and the customer obtain trust. By eliminating the need for third parties, insurers could gain more independence and reduce the costs required for communication between the parties.

A SWOT analysis of the two companies made comparing Fizzy and Etherisc easier as their strengths and weaknesses could be easily distinguished. However, some characteristics could be oversimplified due to the limited space within the SWOT analysis. Of course, the SWOT analysis results might be subjective, but in our case, they could be supported by existing literature.

7. Conclusion

Blockchain technology can potentially transform travel insurance, especially in the context of flight insurance. Insurance providers can create more efficient, transparent, and customer-focused contracts by leveraging the features and benefits of blockchain technology. With the use of blockchain technology come several challenges that must be considered. Even though Blockchain has seen enormous growth throughout various industries, the insurance industry needs to catch up, according to Yu and Yen (2018). By taking a closer look at two pioneers in the flight delay insurance industry, the report aims to determine whether blockchain implementations could disrupt the industry.

Fizzy and Etherisc leverage blockchain technology to address inefficiencies by applying DLT. This approach allows for the secure recording of data and payments, reducing fraud risk and increasing accessibility to insurance.

Two obstacles that threaten the implementation of blockchain technology are the missing legal framework and the lack of understanding of blockchain technology. Whereas the first could prevent a market entry, the second could hinder people from trusting blockchain-based products. Furthermore, the first problem is more challenging to influence than the second.

Fizzy and Etherisc have different organisational approaches. Whereas Fizzy is a product by an established insurance company (AXA), Etherisc is a startup that offers an entire ecosystem. The latter is a DAO, meaning there is no singular controlling party. On the one hand, using an existing ecosystem will lead to a loss of being the only controlling party for the insurance; on the other hand, an existing insurer could use such an ecosystem to offer their insurance. This leads to the challenge of choosing the right technology stack and getting the proper IT support. To undermine this challenge, Shetty et al. (2022) point out that adoption costs depend on the methods and technology chosen to validate and write the blocks, the authentication methods, the digital certificates, and the signatures needed for transactions.

Ultimately, changing an existing product to blockchain-based or offering a new product based on a new ecosystem depends on the insurer's needs. The favourable way is to remain the only controlling party, applying blockchain technology as Fizzy did.

Learning from the two case studies in this report, it is evident that the lack of customers is one of the urgent problems that should be addressed. Blockchain technology in the travel insurance industry can be ground-breaking if the mentioned obstacles can be handled appropriately. To do this, researching how to gain public trust and educate them about blockchain technology is recommended.

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