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ASSESSING THE POTENTIAL FOR INTRODUCING UTILITY TOKENS IN THE RENTAL MARKET FROM A STAKEHOLDER PERSPECTIVE

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ABSTRACT

This study looks in-depth at the critical factors for utility token adoption in the rental market, considering insights from tenants, landlords, and property managers. Utilizing literature review, updated regulations, and a Deductive Grounded Theory approach, it identifies key drivers (Utility, Trust, and Ease of Use) and links them to prevalent rental market challenges. It then proposes potential problem-solving services and validates these findings with a leading utility token researcher. The study concludes that a phased strategy, deploying high-utility services on a private blockchain, can effectively mitigate volatility risks and boost adoption, providing a strategic roadmap for startups navigating this space.

Keywords: Utility Tokens, Token Adoption, Utility, Trust, Ease of Use, Grounded Theory

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1. INTRODUCTION

As the awareness and understanding of blockchain technology and cryptocurrencies expand, businesses across various industries are exploring how to leverage these innovative tools. Unlockit is a Portugal-based startup that aims to revolutionize the real estate landscape by leveraging the use of blockchain. However, the traditional real estate market, characterized by strict regulations, poses a major challenge to innovation. Unlockit has set its target on the rental market to explore the potential of utility tokens.

Initial findings of the discovery process indicate that widespread misconceptions about the value and utility of tokens are significant obstacles to adoption. Insights from industry professionals underscore this issue. For instance, the managing director of a prominent Portuguese bank noted the presence of around 25,000 tokens, most of which he deemed valueless. Furthermore, a transaction analyst from a German real estate private equity fund voiced skepticism about token usage in high-value transactions, signaling additional barriers in the rental market. However, the legal requirements in the rental market are less restrictive compared to those in the real estate market. This creates a promising opportunity for Unlockit to gain traction and brand awareness. As a result, this study intends to unearth the key drivers of utility token adoption from the perspective of all stakeholders (tenants, landlords, property managers) and proposes insights on how to introduce a token adoption.

To achieve this goal, the study first provides an extensive literature review, discussing various tokens, recent regulations such as MiCA and GDPR, and establishing a theoretical framework that includes relevant factors influencing token adoption. Then, utilizing a deductive grounded theory approach, it clusters problems in the rental market and identifies services that address these problems. To validate the findings and ensure their relevance to the startup, an expert interview with a leading researcher in the field of utility tokens will be conducted.

2. LITERATURE REVIEW

With the rapid development of blockchain technology and the increasing interest in token-based solutions, understanding the unique features and potential applications of tokens have become increasingly important (Swan 2015). The design of the token determines which regulations apply and how to increase token adoption in the rental market, as they can facilitate transactions, provide access to goods and services, and ensure regulatory compliance (Benedetti, Abarzúa & Caceres Fuentes, 2021). Through an in-depth review of the literature, this section aims to provide a comprehensive understanding of token types, the regulatory framework and potential factors influencing token adoption in the rental market with a focus on providing utility.

2.1. Utility Tokens, Security Tokens and Stablecoins

In the blockchain and cryptocurrency ecosystem, Utility Tokens, security tokens, and stablecoins are three major types of tokens that serve different purposes and have distinct characteristics (Swan 2015; European Commission 2023). These differences have significant implications for their adoption in various projects and industries, including the rental market. This section explains the definitions, functions, and characteristics of each token type, as well as their potential impact on the rental market, drawing on current research and literature.

Market in Crypto Assets (MiCA) defines a 'crypto-asset' as a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology. A 'utility token' is defined as a type of crypto-asset intended to provide digital access to a good or service, available on distributed ledger technology (DLT), and is only accepted by the issuer of that token (European Commission 2023). These tokens can be fungible or non-fungible, meaning they can either be interchangeable or unique. Utility Tokens are created for specific use cases and are designed to enhance the value creation process of the issuer's ecosystem. They can be compared to merchant pre-paid cards, which are tailored to an issuer's needs and are intended to be used within the issuer’s ecosystem, such as physical or online stores. However,

Utility Tokens differ from pre-paid cards in several ways, including the absence of a monetary base, their variable value and their potential use as cryptocurrencies (Benedetti, Abarzúa, and Caceres Fuentes 2021). In the context of the rental market, Utility Tokens can provide the right to unlock services (Kalyuzhnova 2018). They can also be used to finance development, reward early adopters, align economic incentives, and enhance network effects between stakeholders (Baker et al. 2023). Security tokens are blockchain-based cryptocurrencies that are subject to existing securities laws, which are also defined in the new MiCA regulation (European Commission 2023). They represent ownership in an underlying asset or company and can provide fractional ownership and investment-related services. Security tokens follow a clear regulatory framework, ensuring compliance and reducing the risk of future regulation. However, security tokens are more complex and time-consuming to develop due to limited flexibility in terms of programmability than Utility Tokens. For example, higher regulations may require additional licenses or registrations for platforms and service providers, increasing costs and complexity (Benedetti, Abarzúa, and Caceres Fuentes 2021). Stablecoins are a type of digital currency designed to minimize price fluctuations by being backed stable asset, such as fiat currencies, commodities, or other cryptocurrencies (European Commission 2023). They combine the advantages of cryptocurrencies, such as fast transactions and decentralized networks, with the stability of traditional currencies, which makes them really unique in the crypto environment (Benedetti, Abarzúa, and Caceres Fuentes 2021). In the context of the rental market, stablecoins can be used as a means of payment for rent, security deposits, or other property-related transactions without the risks associated with price volatility in traditional cryptocurrencies or Utility Tokens.

When selecting the most appropriate token type for their platforms, startups focus on fast-growing, scalable solutions in the rental market. The key drivers will be discussed in Chapter 2.3. Utility Tokens offer advantages such as lower regulation and customization but carry

regulatory risks due to less regulation (European Commission 2023). Therefore, this study aims to analyze the potential of introducing Utility Tokens by weighing the challenges and benefits (as seen in Appendix Figure 3). Chapter 2.2 examines the regulatory framework for its potential and risks so that startups can ensure scalability, regulatory compliance, and user acceptance of their tokens while achieving greater regulatory stability. Thus, it's crucial for startups to monitor regulatory changes and ensure legal compliance.

2.2 Regulatory compliance:

The regulatory environment surrounding cryptocurrencies plays a crucial role in token adoption and trust. For instance, uncertain regulatory environment has hindered growth. Clear and well-defined regulations can boost trust and confidence in the market (Zohar 2015).

2.2.1 MiCA and Howey Test

The MiCA regulation is the latest European regulation governing the use of Utility Tokens. This section provides in-depth insights into how this regulatory framework may impact the adoption and use of Utility Tokens within the European context. It is supporting other existing general laws such as the Markets in Financial Instruments Directive (MiFID II), which regulate financial markets. To ensure, the token does not apply to security laws, the Howey Test analyzed in the Appendix 8.1 can be used to give a first insight. In order to offer utility tokens in the European Union (EU), issuers must meet certain requirements. These include being a legal entity in the EU and providing a white paper that meets a number of requirements, such as a clear description of the issuer and the project, detailed characteristics of the offering, and a statement from management that the white paper is compliant. Moreover, notifying their 'home' EU state of their intention to offer their utility token. The new regulation sets a clear framework for Utility Tokens ensuring a more stable outlook while mitigating the risks mentioned in Chapter 2.1 (European Commission 2023).

2.2.2 GDPR Compliance

The General Data Protection Regulation (GDPR) is a European regulation that focuses on data protection and privacy for individuals within the EU and the European Economic Area (EEA). GDPR compliance is essential for the adoption of Utility Tokens in decentralized rental platforms as the handling of users' personal data is crucial for maintaining trust in the platform (European Parliament and Council 2016; European Parliament and of the Council 2016; Finck 2019). Two key challenges arise in the context of GDPR compliance and blockchain technology: Data Controllership and Accountability and Data Modification and Erasure. The analysis on these two problems can be found in the Appendix 8.1.

The following strategies for GDPR compliance in decentralised rental platforms need to be considered: Data minimisation and purpose limitation, right to erasure and off-chain storage solutions, privacy by design and by default, and data storage and transfer compliance. Incorporating the principles of data minimisation and purpose limitation can help meet the requirements of the GDPR. This involves collecting and processing only the personal data that is necessary for a specific purpose (Finck, 2019). In a decentralised rental platform, it is essential to ensure that only relevant and essential data is stored on or off the chain. To address the challenge of data erasure in a blockchain environment, solutions such as storing personal data off-chain and only storing hashes or references on-chain can be implemented. This approach makes it easier to amend or delete personal data, in line with Articles 16 and 17 of the GDPR. Implementing privacy-preserving technologies and mechanisms, such as zero-knowledge proofs or secure multi-party computation, can help ensure the protection of personal data by design and by default. This approach is in line with the GDPR requirement to consider privacy from the initial design phase of a project (Finck 2019; Ethereum 2023). To comply with GDPR restrictions on data transfers outside the EEA, off-chain storage solutions with appropriate data protection measures can be used. This helps to mitigate the challenges of

storing data on nodes outside the EEA in a decentralised platform (Finck 2019).The development of a decentralized rental platform that combines on-chain and off-chain data necessitates a strong focus on GDPR compliance, achieved through the use of privacy-preserving technologies, adherence to data minimization principles, and careful management of data controllership, modification, and erasure. Finck (2019) suggests private and permissioned blockchains having the ability to comply with GDPR.

2.2.3 eIDAS Regulation

eIDAS (Electronic Identification, Authentication and Trust Services) is an EU regulation on electronic identification and trust services for electronic transactions in the European Single Market (European Parliament and the Council 2014). The eIDAS regulation (Appendix - Figure 4) has created a predictable regulatory environment to enable secure and seamless electronic interactions between businesses, citizens and public authorities. It provides a framework for digital trust services, including electronic signatures, seals, time stamps, registered delivery services and certificates for website authentication. In context of fully digitalizing the rental process, this framework will be analyzed. The in-depth analysis is in Appendix 8.1. To concluded, digital signatures can benefit from eIDAS regulations such as digital verification and the possibility of signing digital contracts using Advanced Electronic Signature.

2.3 Theoretical Framework on Willingness to Adopt

The most known Cryptocurrency, Bitcoin, has not gained widespread adoption as a general-purpose payment method despite high awareness, displaying high adoption barriers (Kowalski et al. 2023). In this literature review, a model is created for the deductive grounded theory approach by examining all relevant factors for the startup to successfully launch its token.

Research on the adoption of cryptocurrencies for investment purposes has found that social influence, effort expectancy, and perceived trust are the most important factors for

cryptocurrency adoption (Kala and Chaubey 2023). This aligns with the research on the adoption of new technologies which are: ease of use (i.e., how easy it is to use new technology), usefulness (i.e., how much does new technology benefit a user's performance), and subjective norm, which refers to the influence of other people's opinions and expectations on an individual's decision to use a technology (Murko and Vrhovec 2019). From a practical point of view, the utility token needs to provide highly valued utility to the end-user in order to increase adoption. Additionally, concepts such as blockchain, wallets, and tokens are relatively novel and necessitate a high degree of user-friendliness (earlier framed as effort expectancy) for their effective adoption and use. Finally, subjective norm has a high influence due to resulting trust in family, friends or for example celebrities. Therefore, it was also found that trust is a key characteristic to influence token adoption (Murko and Vrhovec 2019). A Systematic Review on Blockchain Adoption found that usually the Technology Acceptance Model (TAM) including the earlier mentioned factors ease of use and usefulness influence technological adoption (Davis 1989; Masrom 2007; AlShamsi, Al-Emran, and Shaalan 2022). Kowalski et al. found that Bitcoin payment adoption barriers include usability, performance, and political drivers (Kowalski et al. 2023). Reflecting the importance of political environment, 2.2 Regulations already analyzed the most recent laws applicable to introduce a token for a rental platform.

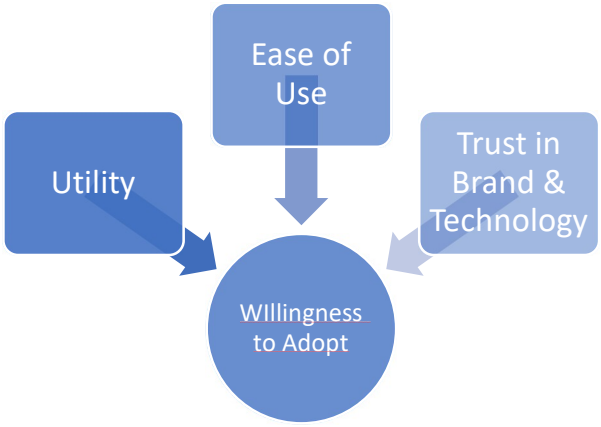

Figure 1: Adoption Model based on (Davis 1989; Murko and Vrhovec 2019)

Based on the widely used TAM model and the overlap and the found significance of trust to determine the intrinsic motivation of the willingness to adopt, the following main themes are

defined and explained in detail emphasizing on their importance on increasing token adoption in the rental market.

Utility: The primary goal of the rental platform is to provide value to its users. If the platform does not offer useful features and services, it is unlikely to gain traction in the market. That's also why the TAM's first determinant is the perceived usefulness (Davis 1989; Masrom 2007). Applicable for the study would be the usefulness of a service unlocked by the utility token. Benedetti and Nikbakht also highlight the importance of network economics, where the value received by network participants increases as the number of network participants grows (Benedetti and Nikbakht 2021). Therefore, Network effects can be seen as an additional element to provide more value to the customer, which will not be measured in this explorative study. By focusing on the usefulness of the platform, the study aims to evaluate the potential benefits it can provide to various stakeholders in the rental market and thereby outlines most valued services which can be accessed through token usage.

Ease of use: The TAM's second determinant is the perceived ease of use which is a crucial for the adoption of new technologies (Davis 1989; Masrom 2007). Therefore, improving the user experience is vital in ensuring the successful adoption of Utility Tokens in the rental market. Moreover, it has been found that the ease of use, directly influences the perceived usefulness (Warkentin et al. 2002). Hence, emphasizing a seamless user interface and a user-centric approach is paramount. This focus entails the creation of services that are intuitive to navigate and use. The initial interaction between a user and the process of purchasing the token, as well as their first transaction on the platform, are critical elements for successful token adoption. By focusing on ease of use, the study aims to understand whether the rental platform's design and interface can facilitate widespread adoption in relation to the education to all users. Considering the current limited adoption of tokens, it is crucial for the platform to provide an exceptionally user-friendly experience. This will facilitate a better understanding of the perceived benefits of

using the decentralized platform for the users. This might include wallet services and the first interaction with a token.

Trust in technology and brand: Trust is a key factor in the adoption of any new product or service, especially in the context of a rental platform that deals with sensitive information and transactions. In the context of Utility Tokens and cryptocurrencies, trust in the underlying technology, such as blockchain, and the brand associated with the token or platform is essential for widespread adoption (Murko and Vrhovec 2019; Kala and Chaubey 2023). Alaeddin and Altounjy (2018) emphasize the importance of awareness and trust in facilitating digital currency adoption for Gen Z generations. In the context of a rental platform, the study identified a substantial influence of awareness and trust on attitudes towards Utility Tokens. This influence, in conjunction with satisfaction derived from the platform's services, can promote the intent to use Utility Tokens (Alaeddin and Altounjy 2018). As previously introduced, the subjective norm, can also affect the adoption of Utility Tokens in the rental market (Murko and Vrhovec 2019). One way is for example E-Word-of-Mouth, which has a significant influence on brand image (Kala and Chaubey 2018). However, the proposed model does not consider the subjective norm, as the main goal of the research is to understand the intrinsic motivation that leads individuals to adopt tokens based on their perceived value, rather than being influenced by social pressure. Trust is built over time through repeated positive experiences, but it can also be easily lost or damaged by a single negative event (Lewicki, McAllister, and Bies 1998). This highlights a relationship between usefulness, trust and ease of use and, furthermore, leads to the idea of gradually introducing the token in a phased approach using the highest utility services first. The goal of the study is to determine users' current trust in cryptocurrencies and in the underlying blockchain technology, as well as a brand's trustworthiness and proposes a strategy on how to introduce the token in order to gain users trust and increase willingness to adopt. Moreover, compliance with regulations, such as GDPR and MICA, is considered a fundamental

basis for gaining trust and doing business as a legal entity, undermining the focus of the literature review in section 2.2. To conclude, the proposed model will be used to create an interview guide and further examining how the token can be successfully introduced. Ultimately, it will help in the to build the tokenomics and development of successful token-based projects in the rental market but could potentially applied in other industries as well.

3 RESEARCH METHODOLOGY

After conducting in-depth interviews to gain a good understanding of the real estate market, a deductive Grounded Theory based on the proposed model's themes (utility, ease of use and trust). This methodology aims to provide an understanding of stakeholder experiences in the rental market, their challenges, and potential readiness to adopt Utility Tokens. Afterwards, the results are cross validated with an experts' interviews on the created results to provide substantial value to the startup. Grounded Theory serves as the foundation of this study due to no specific literature on utility token adoption in the rental market. Its selection is rooted in its capacity to generate theory from data, making it highly suitable for examining complex phenomena such as token adoption within the rental market. It is a deductive approach due to the created theoretical framework which identified the drivers including trust, utility and ease of use (Charmaz 2014). In-depth interviews are conducted to specify problems in the process, the value add of specific services and ways to make interviewees use a token. The ranking of the services is based on the perceived additional value it provides by the respective stakeholder through in-depth interviews. The themes and problems were then linked to the ranked services to get a comprehensive understanding on how to leverage utility trust and ease of use for token adoption. Then, in-depth analysis of expert

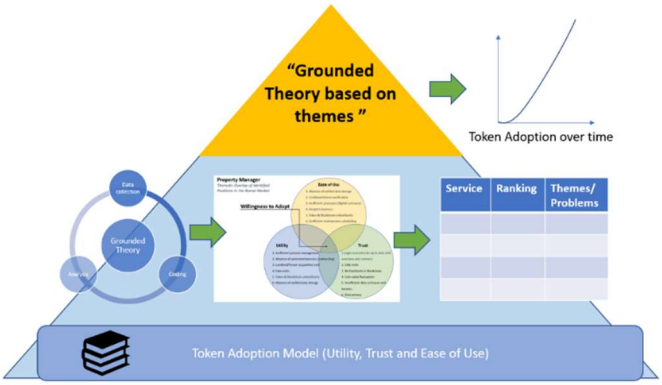

Figure 2: Grounded Theory Model

interviews put the findings into context. Discussing all findings, a grounded theory based on the results of the themes on utility token adoption in the rental market is proposed. This theory provides insight on how to leverage the themes by providing most valued services and an approach on how to introduce a token to mitigate identified problems proposed (Glaser and Strauss 1999).

4 STAKEHOLDER ANALYSIS

The research explores the potential for adoption of a blockchain-based solution in the rental market, using the proposed Adoption Model, to analyze stakeholder interviews based on the themes of the research model (usefulness, ease of use, and trust). The results of the interviews provide in-depth understanding of the problems in the current process, thereby shaping the design and functionality of the proposed platform to increase token adoption. In Chapter 4.4 the results of an expert interview with the one of the primary researchers are provided and evaluate the other findings and suggest further potential. Finally, discussing the results in section five, this will lead to a Grounded Theory built on the results shown in this chapter. This chapter focuses on various stakeholders including tenants, landlords, and property managers which include realtors to ensure an inclusive and effective platform that caters to their needs and optimizes user utility. Table 1 shows the services discussed in this section, while Table 2 provides an overview of all interviews conducted. These services were created in the initial research, which included various in-depth interviews of real estate stakeholders and an additional analysis on existing platforms such as Immobilienscout24, Idealista and WG-Gesucht. These services were reviewed during the regular survey of prospective tenants by asking open-ended questions about the types of services they have been missing. The services were identified via pre-interviews with various industry experts of the real estate market as well as analyzing existing platform such as Immobilienscout24 & Idealista,

4.1 Tenant Analysis

Tenants are individuals or entities that rent residential or commercial properties from landlords. They are crucial stakeholders in the real estate market. As end-users, their experiences, needs, and concerns significantly influence the success and acceptance of the Utility Token. Therefore, it is important to understand the tenant perspective is essential to ensure value creation, a good user experience and token adoption. This section discusses the findings from the interviews conducted with tenants, focusing on their experiences in the rental market, their perceptions of problems they might face, and their views of the rental platform services they have used and might use in future. Lastly, it is asked how the startup could make sure they would use such a token finalizing the study of reducing adoption barriers. The literature review discussed that Tenants' (user) adoption and use of the utility token will largely depend on the perceived benefits, ease of use, and trust in the technology and brand.

It is found that the tokens need to be easily explained and seamlessly integrated into the platform. Trust in the platform is a prerequisite for trust in the token, and this trust is built over time, often reinforced by the validation of peers using the platform. The issue of token volatility is also raised, suggesting that utility tokens with stable value may be more likely to be adopted. Some interviewees suggested that incentives such as discounts for token usage or free trials could also stimulate initial token adoption. Appendix Figure 5 shows a comprehensive overview of the thematic overlap of all problems identified in the rental market.

Table 3 shows the tenant service ranking and the thematic overlap and problem association. It enables an understanding of which service might be suitable to foster the themes driving token adoption, while solving certain problems. The following discussion provides an in-depth analysis into the relationships between these services and their thematic overlaps. Digital Identity Verification addresses the problems of prevalence of scams (Utility, Trust) and can be also used for the creditworthiness verification (Ease of Use). Together with Digital Signatures,

both services encounter the problems of absence of fully digital efficient process (Utility), and data privacy and prevalence of scams, which have resulted in financial losses due to deposit transactions specifically applicable for Erasmus Students (Utility, Trust). Moreover, Data about Houses and Rents (e.g. Bluesheets) is valued and tackles the problems of absence of unified data storage (Ease of Use, Utility), and Inadequate visual depiction (Trust). Moreover, Priority Access to chat with landlords tries to solve the problems of hard-to-find housing (Utility) and prevalence of scams (Utility, Trust), especially in times of urgency. Lastly, for efficient digital processes (Utility, Ease of Use) Data Uploading (e.g. Income Statement, Utility costs) can solve the problems of absence of unified data storage (Ease of Use, Utility), creditworthiness verification (Ease of Use), and data privacy (Trust). As tenants become more familiar with these services and the associated token system, additional services can be introduced, such as credit scores, tenant, landlord and house reviews, and 3D room views. Moreover, to foster trust and ease of use, tenants suggested to gradually introduce them to token usage and provide the best user experience to ease their way in unknown terrain. In light of these findings, a token deployment model is proposed that combines a phased approach focusing on high utility services and incentives due to discounts because Tenants created their wish to still provide the possibility to pay in Euro, showing the low trust and familiarity with blockchain and tokens. Therefore, in the early stages, tenants said that “premium services” like priority access and 3D room tours. This could provide an opportunity for them to experience the benefits of token usage without taking on significant risk. As trust in the platform and token grows, more advanced features and services can be introduced. To conclude, digitalized services with high utility enhance token adoption and over time then trust. The ease of use and the gradual introduction of the token are key to increase adoption.

4.2 Landlords

A landlord in the rental market is an individual or a legal entity that owns property, such as houses, apartments, or commercial buildings, and rents or leases it out to tenants. In most cases they involve property managers and realtors handling the administrative tasks, such as finding new tenants and managing the property.

Again, the proposed model themed the occurring problems in the rental process into Utility, Ease of Use, and Trust shown in Appendix Figure 6. In terms of Utility, landlords noted several areas for improvement. They pointed out issues with inefficient process management, absence of automated processes, the high cost of tenant acquisition and prevalence of fake visits, a lack of communication tools, and an absence of unified data storage. Moreover, they also mentioned inefficient maintenance scheduling as a significant concern. Under the Ease of Use theme, landlords emphasized the need for a unified data storage system, more efficient processes, particularly for creditworthiness verification and digital contracts, and a reduction in the "people's business" nature of the industry that currently requires significant human intervention and thereby inefficiencies. Token and Blockchain unfamiliarity was also a concern, along with inefficient maintenance scheduling. Regarding Trust, landlords indicated a need for legal counsel to keep up to date with new laws, a lack of contract knowledge, unfamiliarity with Blockchain, concerns over coin value fluctuation, insufficient data on houses and tenants, and data privacy issues.

Appendix Table 4 highlights that the landlord rankings show a strong preference for Digital Identity Verification, Credit Scores, Tenant, Landlord, and House Reviews, Data about Houses and Rents, and Data Upload (e.g., Income Statements, Utility costs). These result in a strong association to Utility and Ease of Use due to its primary focus on making their processes more efficient and having a central storage space accessing all their data. Other services, Maintenance Scheduling via Platform, Property Management Software, Cleaning, Legal Council, and Ads

also received the highest scores. It is motivated by the fact that landlords expressed their high workload which results in high rankings directly reducing their workload and increase efficiency. Moreover, there are still a lot of manual process involved not utilizing existing services due to no awareness. Moreover, a suggested platform offering all these services in a central space was seen highly beneficial.

Therefore, the willingness to adopt tokens among landlords was tied closely to utility, but also ease of use due to unfamiliarity of tokens and trust. It was significant that Landlords coin value fluctuations was a severe issue and rents will not be accepted in tokens. The reason for this is that they have to pay their mortgage in Euro. However, for additional services they might be willing to use the token depending on the benefits and offered discounts. It is important, that the gradual introduction of a token is also found to build missing trust and gain first experiences with tokens. Possible services mentioned to use for the token include tenant scoring and ads.

Looking at the intersection of the identified problems, preferred services, and willingness to adopt tokens, it seems that landlords would be open to a tokenized platform if it could alleviate their current issues and provide the services, they desire in a user-friendly manner. Trust in the system, stability of the token play crucial roles in their willingness to adopt such a system.

4.3 Property Managers

Property Managers (PMs) are responsible for the day-to-day management of rental properties on behalf of landlords. In addition, real estate agents are included in the definition as they manage contact with the customer in an otherwise completely digital process proposed later in Chapter 5. They play a critical role in ensuring tenant satisfaction and preserving the value of properties. Utility Tokens may provide property managers increased efficiency, time savings, and improved communication with tenants and landlords. The adoption of Utility Tokens by

property managers will be influenced by factors such as a more streamlined process reducing inefficiencies, the perceived value of offered services, and trust in the platform.

In exploring the PMs' perspective on the rental market, the proposed model was used again to discuss the relationship between the issues (usefulness, usability, and trust) and the problems in the current rental process, desired services, and attitudes toward token adoption (Appendix Figure 7). Under Utility, PMs highlighted inefficient process management, absence of automated processes (such as contracting), high landlord/tenant acquisition costs, and fake visits. They also pointed out an absence of unified data storage and the general unfamiliarity with Token & Blockchain technology. In terms of Ease of Use, PMs lamented the absence of a unified data storage system, inefficient processes (e.g., digital contracts), and the "people's business" nature of the industry, which often requires significant human intervention. Token & Blockchain unfamiliarity surfaced again in this category, alongside inefficient maintenance scheduling. Trust was also a crucial concern, with PMs noting the need for legal counsel to stay updated with new laws and contracts, the issue of fake visits, a lack of familiarity with Blockchain, concerns over coin value fluctuation, insufficient data on houses and tenants, and data privacy issues. This shows some similarity to landlords and shows the transition of duties that property managers will take over from landlords.

Appendix Table 5 shows the that interviewees rank Property Management Software, Cold Call Action Button + Scheduling of Visits (Utility) and Digital Signatures (e.g., Smart Contracts) highest, providing Utility by creating efficiencies in their daily work and Trust due to legally binding signatures. Other highly rated services included Data about Houses and Rents (Utility) to gain more knowledge they can then provide to the prospective tenants, Data Upload (e.g., Income Statements) and Credit Scores to filter the tenants according wishes (Utility). Services like Stacking (interest on Tokens that are kept), Smart Contracts (legally compliant), Education and Training, and Tenant have scored high but in comparison much lower than the other

services, because they do not directly influence the utility as much. Other high scoring services were Data about Houses and Rents (Utility) to gain more knowledge that they can then provide to potential tenants, and data upload (e.g., income declarations) and credit scores to filter tenants based on their preferences (utility). Services such as stacking (earning interest on tokens that are kept), smart contracts (legally secure), education and training, and tenants scored high, but much lower in comparison than the other services because they do not affect utility as directly. Especially interesting is that the 3D Room views were seen as solving the problem of fake visits for which people just schedule a visit to "see the neighbors house". The additional interview with a 3D Cameraman from RE/MAX showed fostered this but also elaborated on the benefits and the easiness to create such a video for maximum of 100€.

The willingness to adopt tokens among PMs appears to be largely influenced by their perceived utility and ease of use, as well as trust in the token and the platform it's associated with. This result is very similar to the other stakeholders previously discussed. PMs expressed interest in a token that could be easily explained and integrated seamlessly into the platform, with a stable value and the potential for discounts. Again, Trust in the token seemed to be tied to trust in the platform, brand credibility, and the potential for building trust over time. The correlation between the identified problems, desired services, and token adoption suggests that a tokenized platform could effectively address these problems, provide the desired services, and promote token adoption. However, it is critical to consider token volatility, the need to build trust over time, and the need for a seamless user experience.

4.4 Results Validation Interview

Being one of the main authors researching Utility Tokens in the rental market, this section discusses the insights derived from the in-depth interview with Benedetti gathered while presenting the results and asking open question about the token adoption and key challenges. The interview explored the potential of Utility Tokens in the rental market, strategies for

encouraging token adoption, issues related to token volatility, approaches for familiarizing users with tokens and blockchain, data privacy, and suggestions for future research. The expert emphasized that Utility Tokens can significantly streamline rental transactions and automate payments, consequently reducing friction. Further, Utility Tokens can enable cross-selling services such as insurance, thereby creating an ecosystem and expanding the tokens value and use cases in the rental market. The expert noted to identify high transaction costs and offer the services with highest cost savings to provide more utility. Discussing successful utility tokens he discussed a dual token system that includes both Governance and Utility Tokens. Derived by this example, the researcher proposed the creation of a distinct ecosystem and emphasized on the payment example already identified in Chapter 2.1. He emphasized on the fear of high volatility and therefore addressed the need of a stable value and therefore concluded to utilize the design of a private utility token, which is not listed on secondary markets (delinked from the market), making the start up to the issuer and the market maker to secure stable value by balancing supply and demand accordingly and managing all wallets. He emphasized that stakeholders should be slightly introduced to using wallets. However, the expert emphasized on the result of trade-offs, such as the regulatory control over wallets, the higher maintenance costs, and exclusion from broader communities like ERC-20 or Ethereum. Nevertheless, if needed, the expert highlighted the potential ease of transitioning from a private blockchain and token infrastructure to a public one once user have adopted the system and the brand is well-established. He also emphasized on including the buying and selling process on future platform developments. Moreover, the expert suggested a strategy for mitigating token volatility that goes beyond the design of a private system. To mitigate the barrier of unfamiliarity with tokens and blockchain, the expert advised a subtle approach where users are not explicitly made aware they are using blockchain technology. Implementing a user-friendly interface that allows users to view funds in their accounts could facilitate a smoother transition and adoption. The expert

proposed several areas for future research. The feasibility of storing transaction and housing history on the blockchain was suggested, treating each property as an NFT with its unique characteristics. This could potentially increase a property's value due to its comprehensive history compared to property not having this history. Lastly, he underscored the notion that while a rental platform doesn't necessarily require blockchain technology, its incorporation could yield benefits such as securing funds by attracted crypto investors, increased efficiency and reduced transaction costs, which should be further researched. He suggested to specifically investigate the concept of automated payments due to assumed high transaction costs. These areas of exploration could shed light on potential strategies for bolstering token adoption in the rental market in the future.

5 DISCUSSION

The research findings suggest a multifaceted interaction of factors influencing the adoption of Utility Tokens in the rental market. The regulatory analysis showed that utility faces less regulatory barriers, due to the most recent MiCA regulation. The eIDAS analysis showed the supports of fully digital processes such as digital contract signing. Lastly, GDPR compliance is possible by utilizing on- and off-chain data mix. It was emphasized that private blockchain are easier to comply with GDPR. The adoption model proposed in the literature review assumes that stakeholders' tendency to adopt a utility token depends on its perceived utility, ease of use, and trust in the brand and technology. The stakeholder analysis showed how each theme can benefit by the implementation of various digital services addressing associated problems. Benedetti confirms these key factors in his interview, adding transaction costs as another sub-factor for token utility and thus adoption.

By diving deeper into the findings, they findings reveal that current tenants face problems primarily with fraud, difficulties in house hunting, and insufficient data on properties and landlords. For the startup, it was found that digital services are high in demand, especially for

foreigners living abroad and looking for housing, and can be identified as an easy target group. These issues can be mitigated through digital identity verification and signatures, increased data availability about houses (e.g., blueprints), and priority access to properties, thereby focusing on utility and trust, while ease of use facilitates adoption. Property managers, plagued by problems like fake visits (trust, utility), inefficient processes (utility, ease of use), and lack of centralized data storage (trust, ease of use), can benefit from a suite of services such as digital signatures, property management software, and call-to-action buttons to initiate tenant reviews and schedule visits based on income statements and credit scores (data upload service). Landlords, facing similar challenges, require efficient processes, legal counsel, centralized data storage, and streamlined processes. With this study a digital rental process was created based on these services (Appendix Figure 8).

However, the mere presence of a technological solution doesn't ensure its adoption. Issues like coin fluctuations and unfamiliarity with tokens and blockchain technology significantly affect token adoption and cannot be directly addressed by services but demand careful token design and user experience considerations. Acknowledging the volatility issue of tokens, Benedetti referred to private token designs that can function with stable value due to the market-making power of the platform (issuer) affecting demand and supply and is supported by the GDPR analysis in Chapter 2.2.2. The interview results highlighted a gradual approach towards token use, building trust over time by integrating the wallet set up process seamlessly and offering a "free month" to trial the services. It was also suggested to reward users with tokens for accomplishing tasks like ID verification or data upload to gamify token interaction. Consequently, the seamlessly integrated wallet creation or integration, as displayed in the rental process, will increase the ease of use for first time token buyers. The increasing trust in the token will lead to higher token adoption over time. To conclude all these results, the following grounded theory, applicable to all stakeholders discussed, could be formulated to explain the

value creation of token adoption in the rental market, based on utility, trust, and usability: *"High-utility digital services in the rental market, provided through an intuitive platform, initiate the adoption of Utility Tokens. A phased implementation approach promotes users' gradual familiarization with the token system and the utility of these services, thereby enhancing the ease of use. This familiarization process boosts their trust in the platform and the token. Furthermore, the aspiration for a stable token value plays a significant role in sustaining token adoption over time, with the design of a private blockchain facilitating GDPR compliance being a key element."*

6 Conclusion

The implications for a company aiming to introduce Utility Tokens into its rental market platform are multifaceted. Research on the regulatory framework has shown that Utility Tokens face fewer regulatory barriers while providing the benefits of blockchain adoption. Moreover, the recent MiCA regulation has established a framework for utilizing Utility Tokens in Europe. This research has focused on how to provide intrinsic value by discussing services that solve stakeholders' problems and thereby create user adoption. Additionally, it demonstrated how to reduce adoption barriers by gradually introducing the utility token. A “free trial” and platform “gamification” to earn tokens by verifying or writing reviews have been found to be effective measures. Recurring services required and unlocked by the utility token include priority access (tenants), automated rent check (landlords), and a cold call button (property management). The perceived utility will foster trust over time and therefore enhance adoption. In addition, a private token is proposed where the issuer is the market maker and thus can create a stable value. This could address major drivers influencing utility, ease of use, and trust, thus reducing adoption barriers by designing the token in such a way that stakeholders do not realize they are using blockchain. A tradeoff exists between monetizing the services in a traditional way or using the token to unlock them, which still presents barriers due to widespread token unfamiliarity.

7 Limitations & Future Research

This chapter discusses the limitations and future research directions in the context of utility tokens in the rental market. The study found that not all services require blockchain technology, but further research needs to explore blockchain's potential benefits for these services. The limitations of the research include a reliance on primary data, which limits the generalizability of the findings due to sample size and potential respondent biases. The study did not examine the benefits that services derive from using the blockchain data architecture. The regulatory analysis focused mainly on MiCA, the Howey Test, MiFID II, and GDPR, without thorough exploration of other relevant regulations such as Anti-Money Laundering or Know Your Customer. This might result in outdated or incomplete findings as regulations evolve. Additionally, the study's findings are context-specific due to factors such as geographical location, regulatory environment, cultural factors, and changing technology influencing utility token adoption. The applicability to other markets or regions might thus be limited. Moreover, the general literature on token adoption might not fully capture the nuances of each stakeholder group in the rental market. Future research could further explore utility token adoption in the rental market, including in other real estate segments such as commercial properties. Longitudinal studies could show how perceptions, regulatory environments, and technology change over time and how this influences token adoption. Regional comparisons could reveal diverse adoption patterns, given that cultural, legal, and economic factors shape attitudes towards tokens. Efforts to enhance token adoption could also be developed and tested, including educational campaigns, subjective norms, network effects, and user-friendly interfaces. The study suggests exploring the opportunities and challenges of dual token models and private blockchains. Additionally, the adoption of the buying and selling process in such a real estate platform would be an interesting area for future research. This would significantly expand our understanding of the utility token landscape in the rental and broader real estate market.

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8 APPENDICES

8.2 Regulatory Analysis

Howey Test

Since the distinction between utility tokens and other tokens is not entirely clear depending on the use case, the Howey test is presented. In the United States (US), the Howey Test is used to determine assets which are classified as securities. By exploring the Howey Test and its potential application to Utility Tokens in the rental market, it can be provided a good understanding if the Utility Token should be defined as a security and therefore is subject to different laws (U.S. Supreme Court 1946). Both, Howey test, as well as MiCA, define Utility Tokens as non-financial instruments, Utility Tokens are less regulated than instance security tokens or stablecoins.

GDPR Analysis

First, the GDPR assumes that, for each personal data point, there is at least one natural or legal person – the data controller – to whom data subjects can address to enforce their rights under EU data protection law. These data controllers must comply with GDPR. For instance, applications layers or private blockchains are defined as data controllers (Finck, 2019). However, blockchains often seek to achieve decentralization by replacing a unitary actor with many different players, making it difficult to identify a single data controller and therefore responsibility and accountability.

The second problem is the necessity of Data Modification and Erasure to comply with legal requirements, such as Articles 16, data must be changeable, and as Article 17, data must be deletable. Blockchains, however, render the unilateral modification of data purposefully onerous to ensure data integrity and increase trust in the network. Furthermore, processed

personal data needs to be minimized and limited, which poses challenges for blockchain's append-only and immutable nature (Finck 2019; European Commission 2023).

eIDas Analysis

The eIDAS regulation mandates recognition of electronic identifications (eID) by all EU countries, providing a solution for identity verification in rental platforms, thereby reducing fraud and increasing trust. It also establishes a framework for trust services like electronic signatures and timestamps, facilitating digital signing of rental contracts and a paperless rental process. eIDAS promotes interoperability among EU countries, meaning a rental platform could use the same identification and trust services across different countries, easing international expansion. Furthermore, the legal recognition given by eIDAS for these services reduces legal risks and enhances platform confidence, as transactions like lease signing could have legal standing (European Parliament and the Council 2014).

eIDAS, in conjunction with blockchain technology, can establish a secure, trustworthy, and efficient rental platform, where blockchain stores transaction records and contracts, and eIDAS-compliant services handle identification and signing. Blockchain data, according to eIDAS, is considered an "electronic document," making it automatically subject to eIDAS regulation, irrespective of how it is signed. User information is categorized into mandatory, optional, and sector-specific attributes, with mandatory details including current family name(s), current first name(s), date of birth, and a unique, persistent identifier. Anonymity isn't possible in this scenario as some personal data is essential (Lyons 2018).

For a rental contract there is no need of including lawyers, but Advanced Electronic Signature (AdES) should be used since they are uniquely linked to the signatory, capable of identifying the signatory, created using electronic signature creation data that the signatory can, with a high level of confidence, use under his sole control, and linked to the data signed therewith in such

a way that any subsequent change in the data is detectable. In specific, a Digital Certificate issued by a national Certificate Authority and a Qualified Digital Certificate issued by a Qualified Trust Service Provider is needed. To become such a provider, an established business needs to be eIDAS compliant and get audited by a conformity assessment body (CAB) and get accredited by a National Accreditation Body (NAB). Afterwards apply for the supervisory body (government agency of the country in which the business is) and once approved the company is listed (European Parliament and Council 2023; European Parliament and the Council 2014).

One of the goals of the 'qualified' status is to achieve cross-border interoperability and recognition of electronic products and trust services across all Member States. As such, a qualified product delivered by a qualified trust service under a Qualified Trust Service Provider (QTSP) based in any Member State will be considered as qualified in every Member State (European Parliament and Council 2023). To become a qualified trust service provider, a legally established business must firstly have the necessary technical infrastructure and security measures. The business must meet the eIDAS regulation's requirements, including technical standards, security protocols, and administrative procedures, which are verified by an audit from an accredited conformity assessment body. Upon successful audit, the business can apply to the national supervisory body to be added to the EU Trusted List of Certification Service Providers (European Parliament and Council 2023).

8.3 Figures

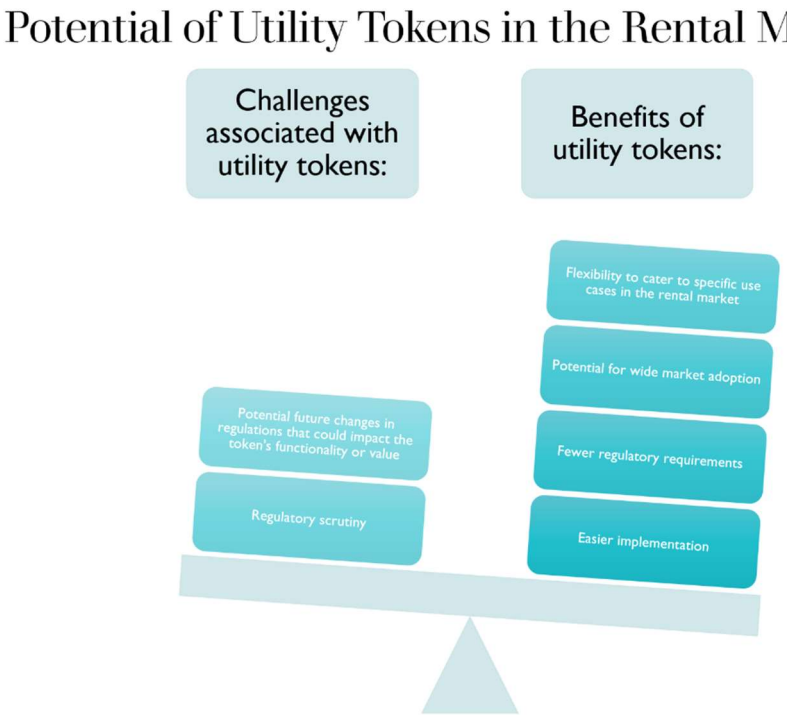

Figure 3: Benefits and Challenges of Utility Tokens

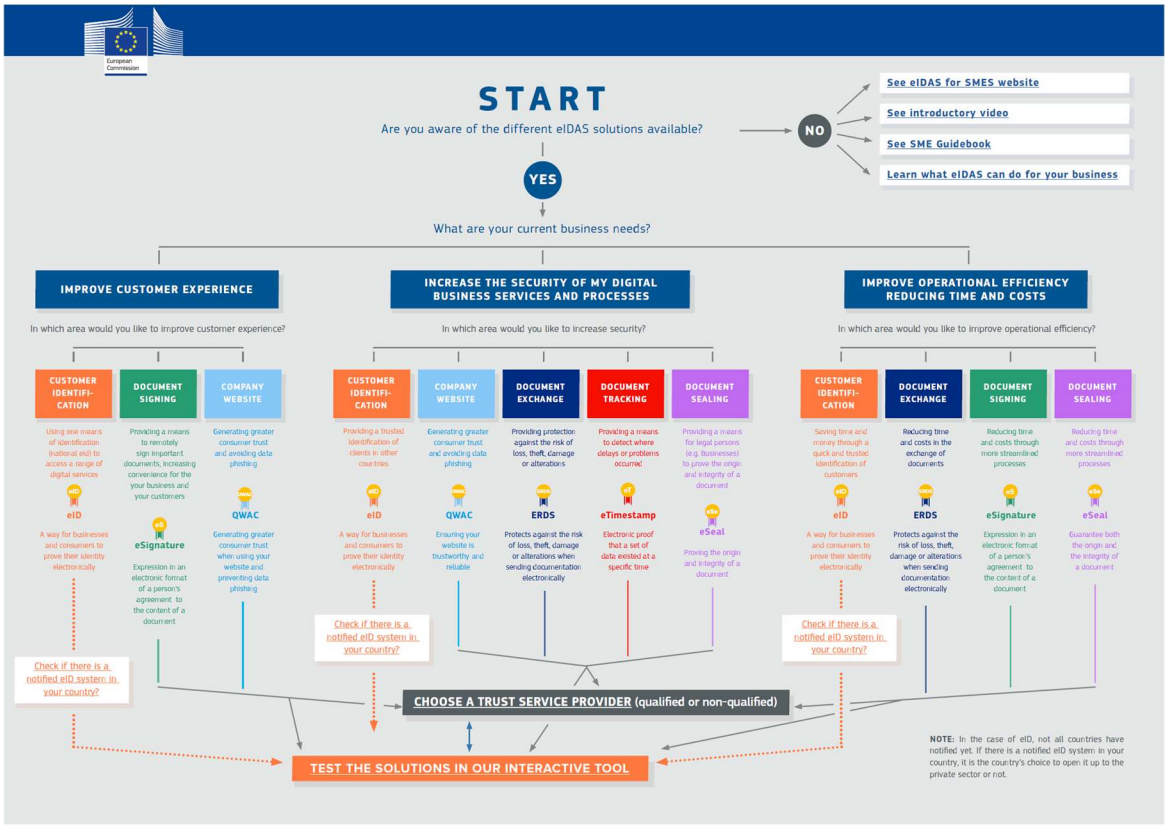

Figure 4: eIDAS Services, Source: (European Commission 2020)

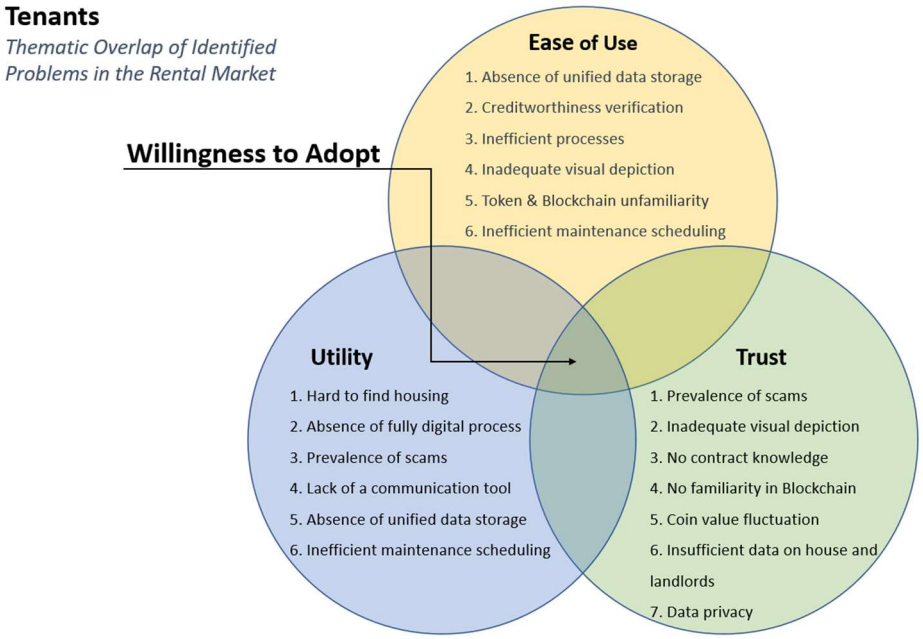

Figure 5: Tenant Thematic Overlap of Identified Problems in the Rental Market

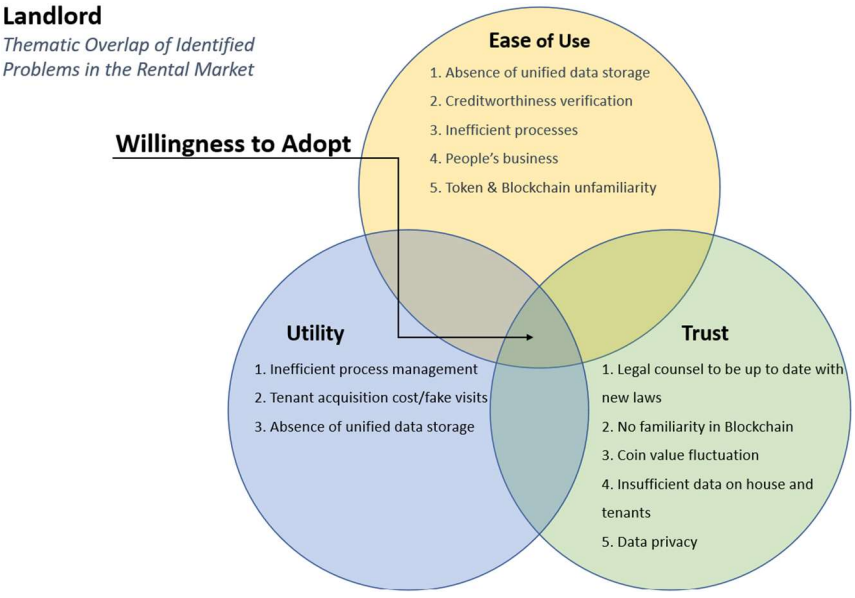

Figure 6: Landlord Thematic Overlap of Identified Problems in the Rental Market

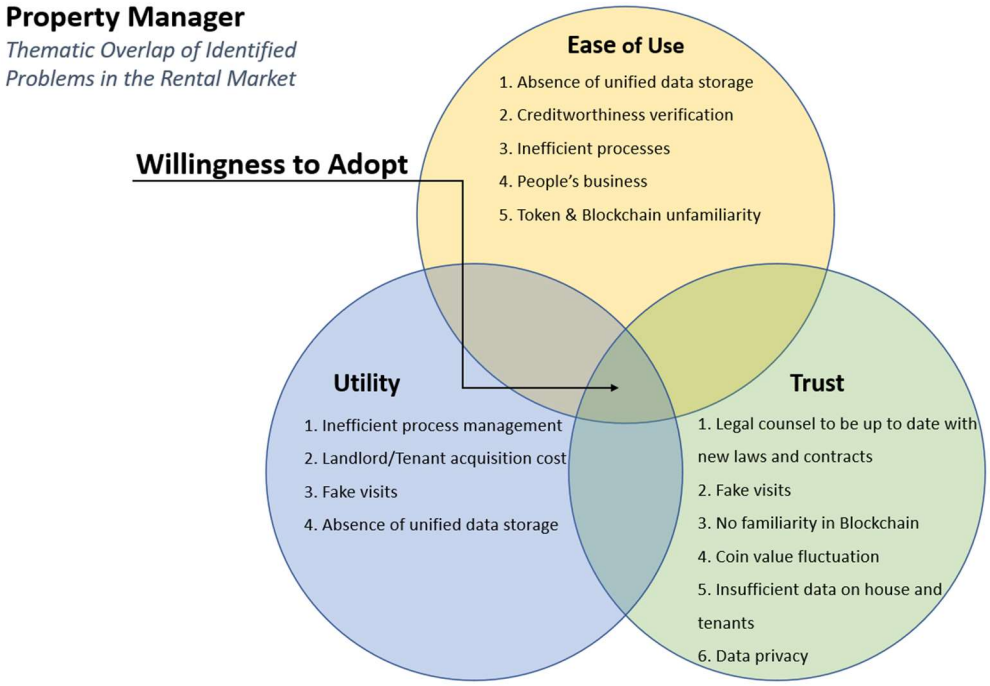

Figure 7: Property Managers Thematic Overlap of Identified Problems in the Rental Market

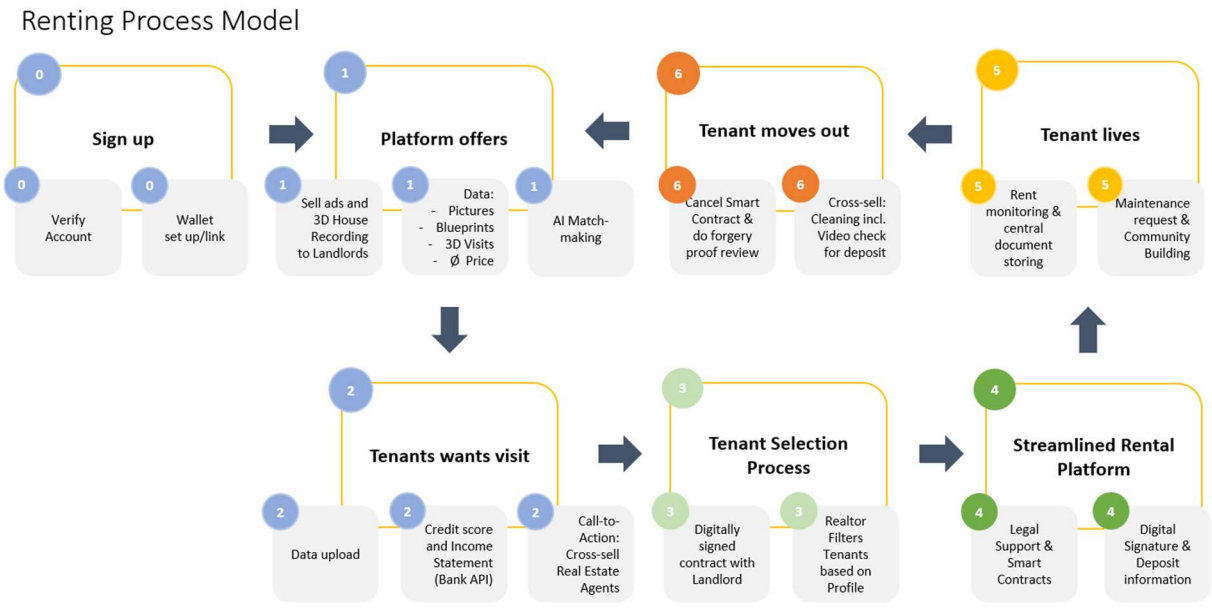

Figure 8: Proposed Digital Rental Process

8.4 Tables

Table 1: Services

Table 1 Services

Number	Services	Primary Source
1	Digital Identity Verification	Unlockit
2	Digital Signatures	Unlockit
3	Credit Scores	Immobilienscout via Kreditreform, Landlord Interview
4	Tenant, Landlord and House Reviews	Amazon reviews
5	Data about Houses and Rents	Immobilienscout
6	Data Upload	Immobilienscout
7	Stacking	Common Blockchain Service to foster network security
8	3D Room Views	Interview witth Remax 3D movie Creator
9	Community Building	Tenant
10	Schedule Maintenance via Platform	Landlord Interview
11	AI Matchmaking	Casa Blanca
12	Prioritized Access	Immobilienscout
13	Property Management Software	Unlockit/ Hausverwaltung Giessen und Partner software
14	Cold Call Action Button	Interview with Real Estate Agent
15	Smart Contracts	Unlockit suggestion
16	Education and Training	Unlockit suggestion
17	Filter Function to Pre Select Visits	Interview with Real Estate Agent
18	Fractionalized Investing - Excluded	Propy
19	Cleaning	Landlord Interview which talked about inefficiencies
20	Legal Council	Property Managers and Landlord
21	Ads	Immobilienscout, Idealista

Table 2: Interviewee List

Table 2 Interviewee List

Number	Occupation	Company	Group
1	Developer - Lecturer University Germany	AI diabetes diagnostics start up	Explorative Research - Blockchain
2	Real Estate Private Equity Transaction analyst	Aventos Group - PE	Explorative Research - Real Estate
3	Credit intermediary Germany	Tecis	Explorative Research - Mortgages
4	Account Executive	Tokeny	Explorative Research - Token Understanding
5	Executive Director & Adjunct Professor Of Finance	Banco BPI & Nova SBE	Explorative Research - Bank
6	Owner	Gutachter-borchardt	Explorative Research - Surveyor
7	CEO	legal factor	Explorative Research - Solicitors
8	3D Video Grapher	Anonymized	Explorative Research - 3D Tours
9	Co-Founder Managing Partner	Reorganiza.pt	Explorative Research - Credit Intermediaries
10	IT Consultant	MGM Consultancy	Tenant
11	Student Medicine	Católica Medical School	Tenant
12	Student Economics	Católica Lisbon School of Business	Tenant
13	Business Owner	LESS.Urb-Imoveis, Lda	Landlord
14	Owner	CSFM - Student Housing	Landlord
15	Property Manager and Private Landlord	Kälber und Partner GmbH	Landlord and Property Manager
16	Owner	Woerner-immo	Property Manager
17	Managin Director	RE/MAX	Property Manager
18	Director	ESE Business School	Validation Interview

Table 3: Tenant Service Ranking

Table 3 Tenant service ranking

Services	Results	Average	Std. Deviation	Problems	Comments
Digital Identity Verification	Tenant 1 5 Tenant 2 5 Tenant 3 5	5.00	0.00	Utility: 2, 3 Ease of Use: 2 Trust: 1,3	
Digital Signatures	Tenant 1 5 Tenant 2 4 Tenant 3 5	4.67	0.58	Utility: 2, 3 Ease of use: Trust: 1,3	Tenant 2 only wants paper contracts
Credit Scores	Tenant 1 4 Tenant 2 3 Tenant 3 4	3.67	0.58	Utility: 2 Ease of use: 2, 3 Trust:	Tenant 1: Schufa credit score is already integrated in Immobilienscout24.de Tenant 2: Not relevant for shared flats
Tenant, Landlord and House Reviews	Tenant 1 5 Tenant 2 3.5 Tenant 3 5	4.50	0.87	Utility: 2 Ease of use: Trust: 1, 6	Fears Data Privcacy
Data about Houses and Rents e.g. Bluesheets, Rent index	Tenant 1 5 Tenant 2 5 Tenant 3 5	5.00	0.00	Utility: 2, 3, 5 Ease of use: 1, 4 Trust: 1, 2, 6	
Data Upload e.g. Income Statement, Utility costs	Tenant 1 5 Tenant 2 4 Tenant 3 5	4.67	0.58	Utility: 2, 3, 5 Ease of use: 1, 2, 3 Trust: 6	All see usef but other Platforms have it alredy (wouldn't increase token adoption)
Stacking interest on Tokens which are kept	Tenant 1 4 Tenant 2 4 Tenant 3 5	4.33	0.58	Utility: 2 Ease of use: 5 Trust: 5, 4	All see the benefit but ease of use is important due to no staking knowledge.
3D Room Views	Tenant 1 5 Tenant 2 4 Tenant 3 5	4.67	0.58	Utility: 2 Ease of use: Trust: 1,3	Tenant 1: Suggested even with VR glasses. Tenant 2: Only 5 if visiting is not possible.
Community building e.g. Digital black board, chat function, etc.	Tenant 1 4 Tenant 2 2 Tenant 3 5	3.67	1.53	Utility: 2, 4 Ease of use: Trust: 1,3	Tenant 2: wouldn't like to have it digital
Schedule maintenance via platform	Tenant 1 5 Tenant 2 4 Tenant 3 5	4.67	0.58	Utility: 2, 4, 6 Ease of use: 3, 6 Trust:	
3D Room Views	Tenant 1 4 Tenant 2 4 Tenant 3 5	4.33	0.58	Utility: 2, 3 Ease of use: 3, 4 Trust: 1, 2, 6	
AI matchmaking	Tenant 1 4 Tenant 2 4 Tenant 3 4	4.00	0.00	Utility: 2 Ease of use: Trust: 1,3	Tenant 3: Filterfunktions are good but can always be better
Priority access e.g. to contact landlords	Tenant 1 5 Tenant 2 5 Tenant 3 5	5.00	0.00	Utility: 2 Ease of use: Trust: 1,3	Woud pay 30
Smart contracts e.g. possibility to include deposit	Tenant 1 4 Tenant 2 3 Tenant 3 3	3.33	0.58	Utility: 2, 3 Ease of use: 3 Trust: 1,3	not a significant problem if landlord is real Contracts have to be on paper less trust in the token --> Not perceived value due to Trust 4 and Ease of Use 5

Table 4: Landlord Service Ranking

Table 4 Landlord service ranking

Services	Results	Average	Std. Deviation	Problems	Comments
Digital Identity Verification	PM/L 1 5 L 2 5 L 3 5	5.00	0.00	Utility: 1 Ease of Use: 1 Trust:	
Digital Signatures	PM/L 1 4 L 2 4 L 3 4	4.00	0.00	Utility: 1 Ease of use: 3 Trust: 5	
Credit Scores	PM/L 1 5 L 2 5 L 3 5	5.00	0.00	Utility: 2 Ease of use: 2 Trust: 4	
Tenant, Landlord and House Reviews	PM/L 1 5 L 2 5 L 3 5	5.00	0.00	Utility: 2, 3 Ease of use: 1 Trust: 1	very important
Data about Houses and Rents e.g. to make more money	PM/L 1 5 L 2 5 L 3 5	5.00	0.00	Utility: 2, 3, 5 Ease of use: 1 Trust:	
Data Upload e.g. Income Statement, Utility costs	L 1 5 L 2 5 L 3 5	5.00	0.00	Utility: 1, 2, 3 Ease of use: 1, 2, 3 Trust: 6	
Stacking interest on Tokens which are kept	PM/L 1 4 L 2 3 L 3 1	2.67	1.53	Utility: Ease of use: 5 Trust: 5, 4	L2: 10% but would not use token Doesn't know anything about token
3D Room Views	L 1 5 L 2 4 L 3 5	4.67	0.58	Utility: 2 Ease of use: Trust: 1,3	L 1: Mentions weaknesses of insides of housing even for buying and selling rpocess to show how it will look like when sold
Community building e.g. Digital black board, chat function, etc.	L 1 4 L 2 4 L 3 5	4.33	0.58	Utility: 1 Ease of use: Trust: 1,3	
Schedule maintenance via platform	L 1 5 L 2 5 L 3 5	5.00	0.00	Utility: 1 Ease of use: 3 Trust:	
Property management software e.g. automated rent payment, rent check and energy saving	PM/L 1 5 L 2 4 L 3 5	4.67	0.58	Utility: 1, 3 Ease of use: 1, 3 Trust:	already uses kasabi and thinks it is a game change would use it (right now the employee is doing everything manually)
Cross-sell e.g. Insurance	PM/L 1 2 L 2 2 L 3 4	2.67	1.15	Utility: 1 Ease of use: 3 Trust: 1,3	
Cleaning	PM/L 1 5 L 2 5 L 3 5	5.00	0.00	Utility: 1, 2 Ease of use: 3 Trust:	
Legal Council e.g. in case of new laws	PM/L 1 5 L 2 5 L 3 5	5.00	0.00	Utility: 2 Ease of use: Trust: 1	seen very important but she is a lawyer so she would'nt require the service
Ads	PM/L 1 5 L 2 5 L 3 5	5.00	0.00	Utility: 2 Ease of use: Trust:	seen very important but she is a lawyer so she would'nt require the service

Table 5: Property Manager Service Ranking

Table 5 Property Manager service ranking

Services	Results		Average	Std. Deviation	Problems	Comments
Property management software	PM 1	5	5.00	0.00	Utility: 1, 4 Ease of Use: 1, 3 Trust: 1,3	PM provides this service and would love digital processes
	PM 2	5				
	PM 3	5				
Digital Signatures e.g. SmartContracts	PM 1	5	5.00	0.00	Utility: 2, 3 Ease of use: Trust: 1,3	
	PM 2	5				
	PM 3	5				
Legal support:	PM 1	4	4.67	0.58	Utility: Ease of use: Trust: 1	
	PM 2	5				
	PM 3	5				
Data about Houses and Rents e.g. Bluesheets, Rent index	PM 1	5	5.00	0.00	Utility: 1, 2, 3, 4 Ease of use: 1 Trust: 2, 6	PM could provide "the address, the corner data, an extensive exposition, a visitation date
	PM 2	5				
	PM 3	5				
Data Upload e.g. Income Statement, Utility costs	PM 1	5	5.00	0.00	Utility: 1, 2, 3, 4 Ease of use: 1, 2, 3 Trust: 2, 6	
	PM 2	5				
	PM 3	5				
Stacking interest on Tokens which are kept	PM 1	3	3.67	1.15	Utility: 2 Ease of use: 5 Trust: 3, 4	interest of 10%
	PM 2	3				
	PM 3	5				
3D Room Views	PM 1	5	5.00	0.00	Utility: 1, 2, 4 Ease of use: 1, 2, 4 Trust: 2, 5	
	PM 2	5				
	PM 3	5				
Cold call action button + scheduling of visits e.g. fizbot	PM 1	5	5.00	0.00	Utility: 2, 4 Ease of use: Trust:	
	PM 2	5				
	PM 3	5				
Smart Contracts e.g. legally compliant	PM 1	4	4.33	0.58	Utility: 1, 2, 4 Ease of use: 3, 5 Trust: 1	
	PM 2	4				
	PM 3	5				
Education and training	PM 1	4	4.33	0.58	Utility: 1 Ease of use: 4, 5 Trust: 3, 4	learn how to use token seen beneficial but not necessary because it is not their job
	PM 2	4				
	PM 3	5				
Filter function to pre select visits e.g. Credit scores (not publicly data available), Income Statement etc. Kredsit	L 2	4	4.67	0.58	Utility: 1, 2, 3 Ease of use: 3 Trust: 2	uses anothe platform already --> casabi --> 500 application but only 20 visits
	PM 2	5				
	PM 3	5				
Tenant, Landlord and House Reviews	PM 1	5	4.50	0.87	Utility: 2 Ease of use: 3 Trust: 5	
	PM 2	3.5				
	PM 3	5				
Credit Scores	PM 1	5	5.00	0.00	Utility: 2 Ease of use: 2, 3 Trust: 5	would be amazing
	PM 2	5				
	PM 3	5				