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ADOPTION OF TECHNOLOGICAL SOLUTION ON FINTECHS USING TRAINING ENGINEERING: CASE OF HEALTH SECTOR

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ABSTRACT

Artificial intelligence and blockchain are game changers for healthcare, but they come with challenges that companies and governments need to design innovative approaches to address. Digitization of all processes that once took days is now just a click away. In recent years, with the rapid development of information and communication technologies (ICT), the integration of financial information systems with new information technologies has led to changes in business operations. Technology adoption is not new to the financial industry, but digital innovation has brought major improvements in system connectivity, customer experience, and newly created and usable data. Financial and technological innovations are multiplying: crowd funding services, mutual loan sites, online banking, mobile wallets, e-commerce. All this is only the beginning of the path that Moroccan banks and financial companies must travel to obtain the main advantages and opportunities that initiate the development of the fintech segment. However, the rapid development of new financial technologies corresponds to the rapid growth of the risks that accompany them. Therefore, an important step in the development of fintech is the identification of the risks caused by their appearance. Recently, digital finance encompasses a multitude of new financial products, financial activities, finance-related software and new forms of communication and interaction with customers, provided by innovative financial companies and financial service providers. Digital innovation in financial services is changing the way financial resources can be accessed, distributed and managed. This study analyzes the approaches of the emerging field of FinTech, InsurTech and Blockchain by specifying the concrete example of the M-wallet technology, applying it in the health sector, knowing that its solution will mainly be based on training engineering.

Keywords: *Fintech , Digital, Information technology, M-wallet, Engineering, Health sector.*

1. INTRODUCTION

Artificial intelligence and blockchain are game changers for healthcare, but they come with challenges that companies and governments need to design innovative approaches to address. The financial sector is an economic sector that includes all activities related to finance. It includes in particular the banking and insurance sector. The financial sector is the set of wholesale, retail, formal and informal institutions in an economy that provides financial services to consumers, businesses and other financial institutions. In its broadest definition, it encompasses everything from banks, stock exchanges and insurers, to credit unions, microfinance institutions and money lenders. The financial sector mobilizes savings and distributes credit in space and time. It not only provides payment services, but more importantly products that enable businesses and households to weather economic uncertainties by hedging, pooling, sharing and assessing risk. An efficient financial sector reduces the costs and risks associated with the production and exchange of goods and services and therefore contribute significantly to improving the standard of living. Today the presence of technological innovations is omnipresent since it is essential to the proper functioning of financial

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institutions. It seemed necessary to us to carry out research on blockchain, more particularly its impact on the activity of Moroccan banks. In this study, we will try to understand the aspects of technological innovation in the financial sector. This paper has a set of objectives, namely: Determine the services offered by financial institutions, Detect the strengths and weaknesses of the implementation of financial technologies as well as the characteristics of these, and finally show how these technologies financial services can help banking and insurance companies improve their operations and the customer experience. The study was carried out to know the impact of fintech on the financial sector. Fintech is developing at a rapid pace and market players need to adapt. Identifying the accompanying risks is therefore a pressing issue for the financial sector and the economy as a whole. The objective of this paper is to create an overview of the concept of Blockchain technology with a focus on financial services is its application in the healthcare sector taking into consideration training engineering. We will explore many of the benefits and some of the challenges of this technology and possible solutions. There is another important aspect, which does not really concern Europe but which must be taken into account: the traceability of medicines. Many counterfeits, particularly from Africa, are on the market. it is a growing and very lucrative traffic. In this case, the blockchain would make it possible to certify and secure in a tamper-proof manner the course of the drug, from its manufacture to the patient's medicine cabinet.

2. CONCEPTS AND LITERATURE REVIEW

2.1 Blockchain

Literally, Blockchain designates a chain of blocks on which reside digital containers that store all kinds of information: transactions, contracts, title deeds, artistic works... All these blocks form a database, similar to the pages of a big book account [1]. This registry is decentralized, that is, it is not hosted by a single server, but by a subset of users. The information contained in the block is protected through several innovative encryption processes so that it cannot be modified afterwards. A Blockchain is a database that contains the history of all exchanges between its users since its creation. This database is secure and distributed: it is shared by its various users without intermediaries, which allows everyone to check the validity of the chain[2].

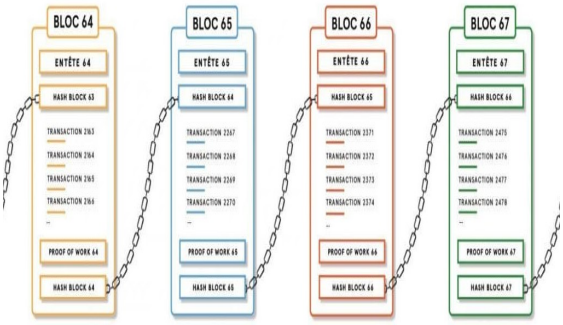

Figure 1: Presentation Of A Registered Blockchain

Blockchain is also a P2P (Peer-To-Peer) infrastructure for encrypted transactions and real-time authentication. It complements the existing Internet infrastructure that enables the publication of information and forms the basis for various applications in the payment network. The most famous blockchain is the one that underpins Bitcoin[3]. But there are hundreds of others, public or private, which can be combined with each other, some of which allow specialization.

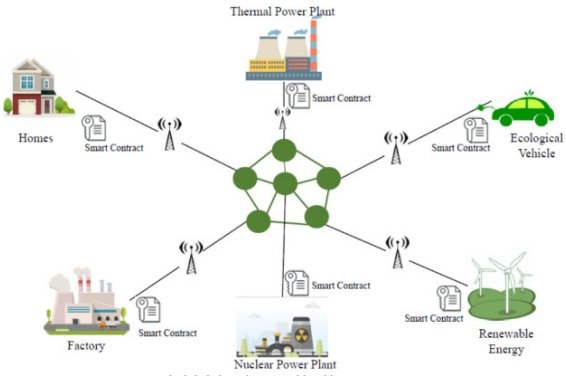

Figure 2: The Different Aspects Of The Blockchain

In a blockchain, all transactions are grouped into blocks. Each block must then be verified using algorithmic methods by the network nodes. Once a block is verified, it is added to the blockchain and is therefore visible to all users[4].

There are 4 different types of blockchain whether public, private, hybrid or consortium.

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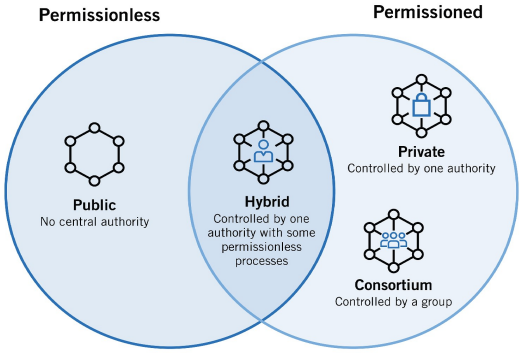

Figure 3: Types Of Blockchain

Public Blockchain:

This is where cryptocurrencies such as Bitcoin were born, which helped popularize Distributed Ledger Technology (DLT). It removes centralization issues, including less security and transparency. DLT technology does not store information in one place, but distributes it through a peer-to-peer network. Its decentralized nature requires a way to verify the authenticity of the data. Public blockchains are unlimited and permissionless, and anyone with internet access can log into the blockchain platform to become an authorized node[5]. This user can access current and past records and perform drill-through activities for complex calculations that validate transactions and add them to the general ledger.

Private Blockchain:

Unlike the public blockchain, a blockchain is said to be private if the principle of consensus is verified by a limited and predefined number of participants.

A blockchain network that operates in a restrictive environment such as a closed network or is controlled by a single entity is a private blockchain. Although it works like a public blockchain network in the sense of using peer-to-peer connections and decentralization, this type of blockchain is much smaller. Private blockchains typically operate on small networks within companies, rather than anyone being able to join and contribute computing power[6].

Hybrid Blockchain:

A hybrid blockchain is a type of blockchain technology that combines elements of private and public blockchain. It allows organizations to create a private, permission-based system alongside a public, permissionless system, allowing them to control who can access specific data stored on the blockchain and what data will be made available to the public.

In general, transactions and records of hybrid blockchains are not made public, but can be verified if necessary, for example by authorizing access via smart contracts. Confidential information is kept within the network but can always be verified. Although a private entity can own the hybrid blockchain, it cannot alter transactions.

When users join the hybrid blockchain, they have full access to the network. The user's identity is protected from other users except when performing transactions. In this case, his identity has been revealed to the other party.

Consortium Blockchain:

The fourth type of blockchain, the consortium blockchain, is similar to a hybrid blockchain in that it has both private and public blockchain characteristics. But the difference is that several members of the organization collaborate on a decentralized network. Essentially, a consortium blockchain is a private blockchain with access restricted to specific groups, eliminating the risk of a single entity controlling the network on a private blockchain[7]. In a consortium blockchain, the consensus procedure is controlled by predefined nodes. It has a validator node that initiates, receives and validates transactions. Member nodes can receive or initiate transactions.

2.2 Fintech

The history of FinTech dates back to the 19th century, but it has been boosted the most in the past two decades by blockchain due to the fundamental change in currencies and payment methods.

Figure 4: The Fintech Network

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Financial technology (fintech) is recognized as one of the most important innovations in the financial sector and is evolving rapidly, thanks in part to the sharing economy, favorable regulation and information technology. (Lee, Shin, 2018). Fintech promises to reshape the financial industry by reducing costs, improving the quality of financial services, and creating a more diverse and stable financial landscape. (The FinTech Revolution, 2015). Fintech is defined as the use of innovative and disruptive modern technology like Blockchain, Artificial Intelligence, Regtech, smart contracts, crowdfunding, P2P lending, digital currency, to provide financial services. We can refer to other definitions and other approaches, According to P. Schueffel "Financial technologies are a new type of financial services offered through technologies to many users. ". According to Rabbani et al. "The fusion of information technology and finance to provide financial services at an affordable cost through a user-friendly experience", Furthermore, fintech can be defined as "Financial technology is the combination of two words, finance and technology, which uses modern information technology to deliver financial services with an improved user experience and at an affordable cost" [8].

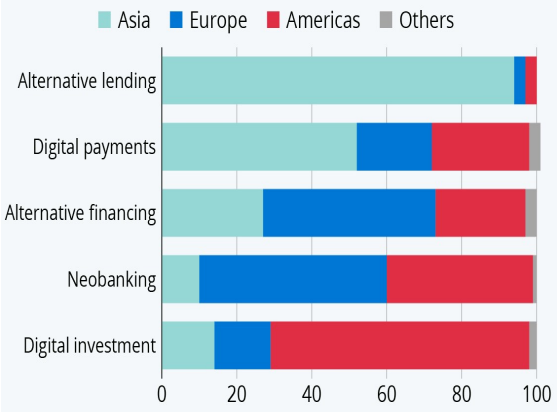

Figure 5: The Regional Differences Of Fintech Adoption (Statista May 2022)

Fintech innovations have many contributions to the financial system, such as lower costs, better quality services, and increased customer engagement and satisfaction. It helps companies gain competitive advantages and improve efficiency. The consumer uses payment frequently and daily, including mobile wallets, PTP mobile payments, foreign currencies and remittances, real-time payments like utility bills, and digital currency solutions. These innovations in financial technology offer consumers convenience, speed of transactions and multi-channel accessibility. (Lee and Shin, 2018). Artificial Intelligence and Machine Learning: AI applications play a key role in a number of financial areas, including bankruptcy forecasting, stock price forecasting, portfolio management, price forecasting Oil, Anti-Money Laundering, Behavioral Finance and Big Data Analytics. FinTech wealth management essentially aims to automate wealth managers (Robo-advisors) to provide financial and investment advice. It uses a specific set of machine learning algorithms to advise investors based on their preferences and characteristics. (Lee & Shin, 2018).

Retail: P2P lending: is a type of market that connects the supply and demand of money through the Internet and consists of individuals lending money to other people, without the intermediation of an institution financial.

Crowdfunding: is another form of fundraising, which uses internet platforms to moderate project ideas and crowds of funders willing to invest funds. In principle, crowdfunding is open to everyone, including private individuals and economic players[9].

Figure 6: The Latest Fintech Trends

Fernandez-Vazquez et al. (2019) found in their studies on blockchain in a FinTech context that the results show a deep focus on challenges such as security, scalability, legal and regulatory, privacy or latency, with proposed solutions still far from complete. 'to be efficient.

The use of the aforementioned technologies also brings major challenges that Fintech players must face. The two major challenges identified are risk management and security and privacy.

Cybersecurity and Privacy Challenges Since the emergence of FinTech, financial services have become the biggest users of data. This gives rise to security concerns regarding hacks and data

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breaches and, in a banking environment where identity theft and asset theft can occur simultaneously, it can lead to potentially catastrophic harm to consumers[10].

Although innovation in finance is not a new concept, the emphasis on technological innovations and its pace have increased. Fintech solutions that use big data analytics, artificial intelligence, and blockchain technologies are currently being offered at an unprecedented rate. These new technologies are changing the nature of the financial sector, enabling many opportunities that enable more inclusive access to financial services. Notwithstanding the benefits, FinTech solutions leave the door open to many risks, which can hamper consumer protection and financial stability. Relevant examples of such risks are credit understatement, market risk non-compliance, fraud detection and cyber attacks. Indeed, fintech risk management represents a central point of interest for regulatory authorities, and requires the research and development of new measures[11].

Around the world, it is imperative to improve the competitiveness of the fintech sector, by introducing a risk management framework capable of overseeing technology innovations without stifling their financial economic potential. A framework that can help both fintechs and supervisors: On the one hand, fintech companies need guidance on how to identify sourcing opportunities for innovation, for example in technology solutions Advanced Regulatory (RegTech); on the other hand, the ability of supervisory bodies to monitor innovative financiers offered by fintechs is limited and advanced supervisory technology (SupTech) solutions are needed. A crucial step in transforming compliance and supervision is to develop uniform, technology-driven risk management tools that could reduce the barriers between fintechs and supervisors[12].

We believe that focused international research activity, coordinated at the level of a highly reputable open access scientific journal with multiple key focuses, such as Frontiers in Artificial Intelligence, can help bridge the gap between technical and regulatory expertise. , in particular by ensuring risk management procedures common to both parties. This could lead to the development of a regulatory framework that encourages innovations in big data analytics, artificial intelligence and blockchain technologies that, at the same time, addresses the concerns of supervisors to enforce regulations effectively and efficiently and that protects consumers and investors.

The Challenge of Risk Management While there are many laws that aim to protect consumers and investors, fintech lending gives rise to "disintermediation", which requires increased consumer and investor protection . In the case of peer-to-peer lending, there are two main areas of concern. First, P2P platforms have less information about their borrowers, compared to traditional banks, and are less able to process asymmetric information. Second, in most P2P lending platforms, the credit risk is not held by the platform, but rather by the investors. Both causes lead to a high probability that the rating system of P2P lenders does not adequately reflect the correct probability of loan default.

3. ADOPTION OF M-WALLET SMART SOLUTION FOR IMPROVEMENT OF THE FINANCIAL TECHNOLOGY : CASE OF HEALTH SECTOR IN MOROCCO

The digital revolution continues to transform most aspects of our daily life. In particular, the digital revolution has resulted in the vertical convergence of business channel capacities. Today, the finance sector is experiencing enormous progress, mainly due to the integration of technology as well as the implementation of several intelligent solutions, in this research work, we have attempted to discuss in depth the adoption of smart m-wallet solution on fintechs using training engineering. The digital revolution also continues to transform the public sector organizations and services E-Wallet System for Bangladesh an Electronic Payment System. o access a financial institution's online banking facility, a customer having personal Intern et access must register with the institution for the service, and set up some password(under various names) for customer verification[13].

In France, for example, the assistance specialist Inter Mutuelles Assistance relies on an application to encourage its 5,000 employees and internationally to walk regularly thanks to recurring challenges. The E-health tool not only allows employees to exercise regularly, but also to create a link, in particular between the different entities for the development of a Fintech system based on appropriate training engineering. to the health sector situation.

M-wallet is a means of payment issued either on a payment account held by a payment

institution, or on a bank account held by a bank. It allows the following operations to be carried out electronically:

- Person-to-person (P2P) money transfers
- Merchant payment transactions
- Cash withdrawal and depos

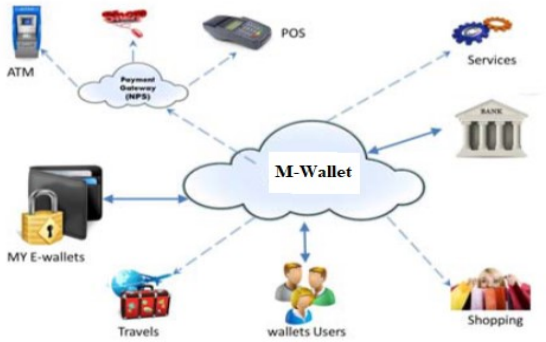

Figure 7: M-Wallet Architecture

3.1. The evolution of payment accounts

Faced with the advent of the pandemic, and in order to reduce the risk of the virus spreading, and to strengthen social distancing measures, Bank Al-Maghrib has introduced relaxation measures, following a consultation process with the APEP[14]. These measures are articulated around two main axes:

- The opening of the payment account: by giving the possibility of opening a level 2 payment account, capped at 5,000 dirhams, through the transmission of a scanned copy of the national identity card in addition to the phone number.
- The enrollment of merchants for the acceptance of mobile payment: by reducing the documentation requested from natural persons operating in a local business and not registered in the commercial register, through the production of a copy of the card of national identity and license number.

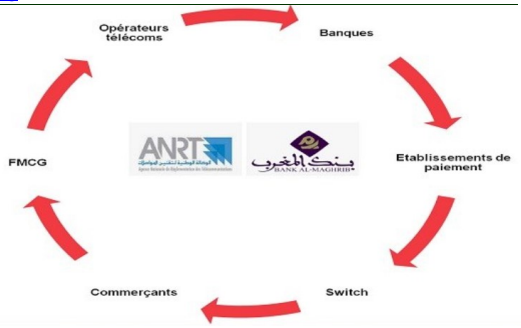

Figure 8: M-Wallet In The Financial Moroccan System Including In The Health Sector

The digitization of Moroccan banks is progressing very rapidly, combining physical institutions and online services. This is due in particular to the numerous regulations at the international level[15], the digitization of payment, as well as the initiatives supported by Bank Al-Maghrib. Bank Al-Maghrib serves to develop digital financial inclusion through the creation of a widely available and low-cost national solution for mobile payment which aims to be an important driver of financial inclusion by accelerating access for the population. to financial services and control the amount of money in circulation.

According to data collected by Le360 from the central bank, at the end of the first half of 2021, the number of mobile wallets issued via payment accounts was 3.1 million, while the number of mobile wallets reported at the end of 2020 was 2.66 million.

In terms of transactions carried out in 2020, Bank Al-Maghrib shows a total of 1.4 million transactions for an amount of 443 million dirhams. “Nearly 51% of the trading volume was carried out by m-wallets issued by payment institutions against 49% by m-wallets backed by bank accounts. In value, 35% of the transactions carried out by the m-wallets of payment institutions were recorded against 65% by those issued by banks”, explains the central bank in its report. The panorama traced shows a predominance of “merchants and invoices” payments. They represent, in number, most of the transactions carried out, thus capturing a share of 73%, against 27% for Mobile to Mobile transfers. For their part, ATM withdrawals represent only 0.4% of total transactions. With regard to m-wallets backed by bank accounts, it appears that payment remains predominant with 70% in number, compared to 19% for transfers and 10% for ATM withdrawals. The breakdown by value, for its part, highlights an inverted trend in the types of m-wallet transactions.

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3.2. Evolution of the M-wallet market in Morocco

We cannot talk about the development of m-wallet solutions without talking about the development of the Moroccan mobile market.

The Moroccan mobile market is one of the most mature in the region, with a penetration rate of 137.5%. The three mobile network operators (Maroc Télécom, Orange and Inwi) offer fixed and wireless services. They have developed mobile data services based on the extended reach of the LTE infrastructure. The growth in mobile data traffic is supported by the popular use of smartphones, which account for around 80% of all mobile phones in use.

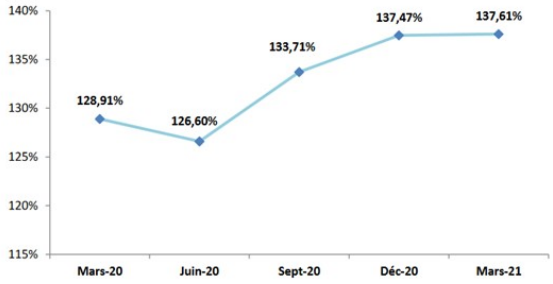

Figure 9: Quarterly Evolution Of The Penetration Rate

In Morocco, Out of a total of 2.44 million accounts opened in Morocco, payment institutions monopolize almost all of them, i.e. 2.14 million accounts. Otherwise, out of every 18 accounts opened by customers in the months following the health crisis, 12 accounts were opened with a payment institution to the detriment of banking institutions. Observers and market professionals explain this clear success by health restrictions as well as by the very aggressive communication and marketing strategy but above all the proximity of these establishments to customers. The same sources confirm that this trend will have to continue in the coming months and years[16].

If these figures do not have a significant impact in terms of transactions and volume, the situation is likely to change radically in the future, especially if the services offered by payment institutions evolve to affect other financial aspects. Be that as it may, the success of payment institutions with the public is beginning to attract foreign operators. This is particularly the case for the Egyptian Tpay mobile, which has set its sights on the national market.

It is a full-service mobile payment platform that enables local and global digital service providers to reach consumers in the Middle East, Africa and Turkey. It should be noted that the operator in question is majority owned by the pan-African investment fund Helios. The latter had acquired in 2018, 76% of the shares in this operator. It should be noted that the London-based Helios fund had signed two major transactions on the Moroccan market over the past two years. After acquiring a stake in the Moroccan subsidiary of the Turkish hard discount brand, BIM, Helios did it again with T2S, the undisputed leader in the distribution and maintenance of medical equipment in Morocco and then in French-speaking Africa, with revenues from order of 700 million dirhams in 2020. Thus, the mobile payment sector is promised a bright future.

The authorities are determined to boost the sector. In this sense, the 2020 Finance Law had provided for a 25% reduction on the taxable base corresponding to the turnover achieved via this method of payment. For officials, it was a question of reducing cash payment flows and encouraging individuals with professional income determined according to the simplified net income or flat-rate profit regimes to use the mobile payment method.

The same government had done it again on the occasion of the amending Finance Act by proposing to replace the aforementioned provisions with a measure which aims to not take into account the amount of turnover achieved by mobile payment for five consecutive years[17], in particular for the determination of the tax base of the income tax due by the aforementioned taxpayers.

Slowly but surely, the mobile payment activity in Morocco continues to grow. According to statistics collected by Le360 from Bank Al-Maghrib (BAM), Morocco had, at the end of June 2021, 3.1 million m-wallets, or mobile virtual wallets, issued either on a payment account or on a Bank account. The latest Central Bank report on financial market infrastructures, published on Thursday, also provides details on how m-wallets are used by consumers in Morocco. Thus, payments (to merchants and payment of bills) represent, in number, the bulk of the transactions carried out, with a share of 73%, followed by transfers from mobile to mobile (27%). ATM withdrawals remain close to zero, with a share of 0.4% of total transactions. The large-scale deployment of mobile payment is considered a strategic priority by the Kingdom's monetary authorities. It is a question of overcoming the circulation of cash and its very costly management. According to estimates by Bank Al-Maghrib, 400 billion dirhams of potential cash flow could be captured by mobile payment. The large-scale deployment of mobile payment would also stimulate financial inclusion and

banking, particularly in the most isolated regions of the Kingdom.

3.3. Mobile wallet and payment card process in Moroccan health sector

To accelerate the reform of the health system, the new Moroccan government is preparing to launch the Riaya card. On October 11, 2021, the new head of the Moroccan government placed the reform of the health system at the heart of his strategy. The executive is committed to "strengthening public health services", in particular by giving itself the means to respond to short-term emergencies and develop the supply of care in the long term. Among the concrete innovations announced, we can cite the creation of an electronic card as well as a financing technology that facilitates access to care. With the Riaya card, patients will no longer have to deposit a guarantee check before seeking treatment. They can also collect their medicines from pharmacies without paying for them, in the event that the latter are reimbursable. Medical expenses will be paid by the National Social Security Fund (CNSS) or the National Fund for Social Security Organizations (CNOPS). Ultimately, the Riaya card, which is ultimately a Moroccan version of the Vitale card in France, aims to allow all Moroccans access to healthcare in the four corners of the Kingdom.

On a practical level For fourteen years now, Moroccan e-commerce has developpet by Maroc Télécom, the only online payment service provider (PSP). A monopoly that did not satisfy e-commerce players who denounced the lack of choice of service providers, the lack of innovation and customer service.

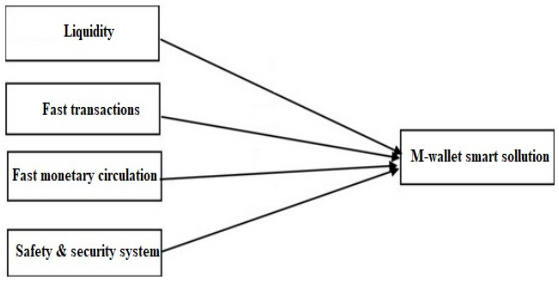

Figure 10: M-Wallet Smart Solution Including In The Health Sector

This is now a thing of the past since Vantage Payment Systems (VPS) has just launched new intelligent solution and two other PSPs will be launched in the near future[18], including AmanPay by M2t and Fast Payment by the president of the FNEM.

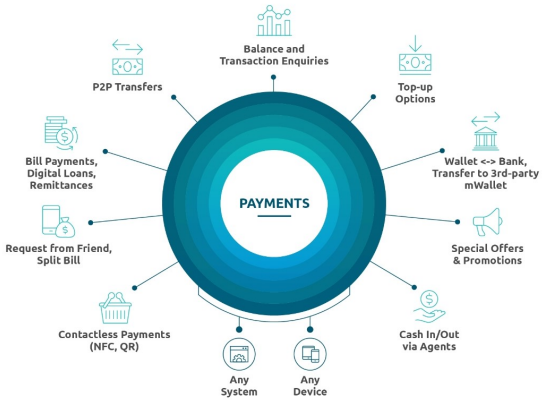

Figure 11: M-Wallet Payment Process Including In The Health Sector

It's not too soon. M2t has been trying for several years now to obtain a license to launch their service from the Center monétique interbancaire, the CMI, the company commissioned by the banks to regulate electronic banking, i.e. electronic, computer and telematic processing. necessary for the management of bank cards and associated transactions, in Morocco (not to be confused with the Moroccan Center for Innovation, also commonly called CMI). Other newcomers are to be expected if we are to believe the requests to the CMI.

3.4. Advantages and Disadvantages of M-wallet in Morocco

When paying, the customer chooses the method of payment. After the payment process is complete, the payment gateway exchanges payment information between the customer and the merchant. In doing so, it must follow specific security standards and comply with the regulations of financial authorities[19]. How a payment gateway is connected to an e-commerce platform can vary. It is possible that a platform redirects customers to external payment pages hosted off-site by the payment gateway. This payment process has several advantages and some disadvantages for all users:

- Less regulation: Regulations for payment gateways are not as stringent as for e-wallet systems. While those applying for the credit cards must adhere to the Payment Card Industry Data Security Standard (PCI DSS) for example, and those in Europe obtain PSD2 PISP

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authorization, there is a big hurdle regulatory that payment gateways typically do not have to franchise: they do not need to obtain an e-money license.

- Enhanced Security: When processing monetary transactions, payment gateways store and exchange personal data. This data is easily misused when it falls into the wrong hands. However, payment gateways need to collect far less data than e-wallet systems to function properly. Ultimately, this makes it much easier for payment gateway owners to ensure data security.
- Less development effort: Developing and integrating e-wallets is a complex undertaking. This is mainly because apart from payment processing, e-wallets also need functionality for top-up and withdrawal, e-money balance management, KYC process for buyers, etc., not to mention the additional user interface to allow customers to interact with their electronic wallets (a customer service area).
- Instant payment: this advantage is particularly important for merchants. E-wallets power payments through the simple exchange of data and e-money. Typically, this equates to instant payment transactions for customers, if the wallet contains enough e-money sales. For merchants, it's a bit more complicated: they receive their funds immediately and will see that the e-money is calculated in their account. But settlement with real money may take some time. Nonetheless, many merchants appreciate the higher degree of financial planning certainty that mobile wallet-based payments provide.
- Secure Storage of Payment Instruments: Users expect payment to be processed securely. Indeed, it is this need that is at the origin of the implementation of electronic wallet technology. When PayPal, the very first e-wallet, launched in 1998, it thwarted the flood of sleazy e-commerce merchants on the young global web, all of whom needed to get their hands on customers' credit card data. PayPal introduced a more secure means of payment, as the payment instrument data remained with the wallet provider. Today, this further adds to the attractiveness of M-wallets. The Digital Wallet software stores user information privately, without merchants having access to what is not intended for them. At the same time, it is more convenient for users. Instead of entering payment information for each new platform they purchase from, users can rely on e-wallets to automatically redeem stored payment instruments. This improves the user experience and prevents cart abandonment while shopping[20].
- Loyalty Programs and Vouchers / Where payment gateways and PSPs are mere transaction facilitators, digital wallet systems can really shine in terms of additional features. For example, digital wallets can not only hold e-money, but also loyalty points and other incentive tokens. They can also process gift cards and coupons directly. Additionally, you can allow users to transfer e-money within the system, providing lending or P2P trading functionality. And that's just the tip of the iceberg[21]. Imagine what you could do by introducing tokenized assets and cryptocurrencies into your M-wallet system.
- Flexible Fee Setup: M Wallets incur the extra spend. First of all, as the owner of the platform, you do not have to pay any fees for internal e-money transactions. Indeed, these transactions take place entirely within the closed online wallet system. No money flows between banks and no PSPs are involved.

4. DISCUSSION AND PERSPECTIVES

From what we have seen, it is certain that the mobile payment activity should constitute in its progression. Admittedly, it was strongly propelled by the advent of the health crisis, which represents a boon for banks which have invested heavily in the digitalization of their services. The number of M-Wallet subscriptions increased from 1.4 million at the end of 2020 to 3.4 million at the end of October 2021. The volume of transactions was 1.4 million at the end of 2020 compared to more than 4.98 million at the end of June 2021, according to a recent behavioral study entitled "Financial Inclusion" published by the United Nations Development Program (UNDP) in Morocco in partnership with Bank Al-Maghrib. It must be said that the health crisis has made the use of mobile phones more frequent. This trend, although bullish, remains slower than expected and is marked by the increase in the use of M-Wallet for bill payment.

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Recall that Bank Al Maghrib had drawn up, in its last report on the infrastructures of the financial market, the way in which M-Wallets are used by Moroccan consumers. Thus, payments (to merchants and payment of bills) represent, in number, the bulk of the transactions carried out, with a share of 73%, followed by transfers from mobile to mobile (27%). ATM withdrawals remain close to zero, with a share of 0.4% of total transactions. Payments, which represent nearly three out of four transactions carried out via M-Wallets, nevertheless cover a wide disparity between bill payments and those made to merchants. In fact, bill payments (water, electricity, vignette, taxes, telephone recharges, etc.) represent almost all mobile payments, i.e. 94% in number and 96% in value, while payment at merchants remains little developed. However, before a generalized deployment, it will be necessary to resolve a lot of pending points, notes the Wali. These include tax aspects, and especially consumer information and education, as well as encouraging merchants and intermediaries to use mobile payment. The holder of an "m-wallet" carries out these operations by entering the telephone number of the beneficiary, who himself must be the holder of an m-wallet, regardless of the establishment that holds the account of this beneficiary. The telephone number becomes the identifying element and operations are carried out instantaneously, in real time. Recall that in terms of mobile payment, Morocco has chosen a fully interoperable solution, that is to say, which connects all the establishments concerned. This is a global singularity, since the countries that have adopted this type of solution operate with several restricted loops. In Morocco, a single loop, a single Switch (developed on occasion by HPS) will make it possible to run this new means of payment.It is a question of reducing the circulation of cash According to estimates by Bank Al-Maghrib, 400 billion dirhams of potential cash flow could be captured by mobile payment. The general deployment of mobile payment would also ensure the development of financial inclusion and banking, particularly in the most remote regions of the country.

5. CONCLUSION

This paper allowed us to acquire a set of knowledge in the fields of blockchain, to then answer the problem of this study: "What is the impact of the intelligent solution M-wallet on the improvement of the fintech sector" . To answer this problem, it was essential to do an in-depth research on the necessary elements, namely the blockchain, fintech and the digital banking system, therefore we presented them first and then draw the following conclusions , The adoption of the smart m-wallet solution on fintechs has become an obligation for finance companies following the increased digital transformation, but this must be done mainly with the help of very solid engineering. Blockchain technology is applied to a wide variety of financial fields. Although the use of blockchain technology has many advantages, there are also risks that come with it. It offers a wide range of possibilities to improve productivity, traceability and transparency, but it is still limited by its lack of maturity, and its interoperability failures. In addition, the introduction of new financial technology services is a means of improvement for players in the financial sector. If financial institutions want to survive or expand their market share, they almost have to adopt digital solutions. According to these conclusions, blockchain plays a role in improving the financial sector with the help of the intelligent solution M-wallet which will disrupt the whole world in the nearest future. As the financial industry sees Blockchain as a way to replace expensive and inefficient payment systems, it could also reshape supply chains, especially in combination with IOT and AI. However, many questions remain about the use of technology, its environmental impact and its governance.

6. FUTURE PROSPECTS

Firstly , The future of fintech is increasingly specialized and dependent on technological progress and innovation. its reliance on these two factors determined to fuel disruptive business models in financial services. in this paper we have studied the adoption of the smart m-wallet solution on fintechs using training engineering to simplify the understanding of the processes of technological use in finance using training engineering. this research work will be completed in the future by an investigation on blockchains in finance is a must for any technological actor and any traditional financial institution which launches new fintech companies. Secondly , 3D simulation serious games or virtual reality applications allow health students to practice in real conditions during their training, this will be an opportunity to develop an article on this subject with an emphasis on technological solutions.

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