Process Optimization Models Using Artificial Intelligence and Digital Transformation of The Insurance Industry

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Abstract. *In recent years, there have been fundamental changes worldwide in the field of the business models, in the way these create value and compete, and in the field of services supplied to customers, which have been driven by the way technology is used to interact with them all. All these changes must be supported by the appropriate strategy, a scalable infrastructure and modern technology capable of delivering: target achievement, resilience, scalability, security, information privacy and technological innovation. The insurance industry pioneer's adaptability to new technologies, considering its clear benefits in terms of improving customer service, mitigating risk and last but not least, increasing the profitability of the business itself. This study aims to analyze how the company which manages the mandatory home insurance system in Romania, Romanian Insurance Pool Against Natural Disaster – PAID S.A has been integrated in this process of digital transformation and to present the circumstances in which the solutions were developed and implemented as well as the effects generated by them.*

Key Words: Digitalization, Insurance, Artificial Intelligence, Marketing Digital, Fintech Innovations, PAID

Introduction

Digital transformation is a "continuous process of adoption and adaptation" (Ipsos and Internet & Mobile World, 2019). According to the Romanian Business Market Digitalization Report (2018, 2017) carried out by Ipsos, this process is deemed to have a positive impact by 66% of the respondents. According to the same survey, "89% of respondents were aware of an increase in the interest of the top management teams to appropriate digital systems and implement innovative technologies for the benefit of their companies".

Fintech innovations refer both to a series of emerging technologies such as IoT, telematics, artificial intelligence, ledger technologies (blockchain and smart contracts) and the adoption of new business models.

Within the series of innovative technologies, artificial intelligence has expanded extremely rapidly in many fields, enabling companies to create unique and sometimes customized experiences for their customers.

Even though it looks Sci-Fi, there have been references to Artificial Intelligence since the ancient times: Greeks talk about the mechanical works of God Hephaestos; the 1900 witness the recovery of the Antikythera mechanism - an ancient mechanical computer, made in around 150-100 BC, whose level of sophistication matches that of a Swiss watch mechanism; the Jewish folklore counts with the presence of the Golems - living anthropomorphic beings made out of clay; in the

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Middle Ages, Leonardo da Vinci's inventions would be put to work in over 600 years only; Frankenstein, the main character in the homonymous novel by Mary Shelley makes reference to the man-made artificial intelligence and all of these are elements supporting mankind's concerns with overcoming the boundaries and the limitations of the physical body and of the lack of capacity of the human mind to encompass, resume and implement the "savoir faire" and the "know-how" that mankind accumulated in time.

In the 1970s, research in the field of Artificial Intelligence was not deemed a matter of priority due to exorbitant costs and technological limitations at the time. It would be resumed 10 years later, when interest resurfaces and the necessary research funds reappear, reaching a peak today thanks to advances in technology and, not least, in augmented computing power.

Thus, the main human intelligence-associated abilities which a computer or a robot (including a virtual one) should have are as follows: the ability, the capacity to reason, the ability to make up sense in a given situation or context, the ability to extrapolate, to generalize, based on a specific case in point (patterns) and the capacity to learn from previous experience (to acknowledge errors, to isolate, correct and avoid them while replicating the recognized pattern).

Additionally, the main behaviors linked with human intelligence which the latter must substitute are as follows: planning, perception, processing (including data processing) and

problem-solving and maybe even one of the most obvious lines of insertion of Artificial Intelligence - creativity and social intelligence.

In what follows, we will mainly focus on such digital transformation behaviors, as these translate in the business environment.

The fields where such technologies are most widely used are: medicine, the military industry, education, facial and voice recognition, data mining, the financial industry, online commerce, etc. Artificial intelligence has thus penetrated our lives taking various forms - such as, for instance, the online shops - where it serves to make purchase recommendations based on previous purchases.

This study sought to build the methodological framework of analysis considering both analyzes provided by large consulting companies and the academic research. Although the research was limited to a single insurance company, with a sui generis status on the Romanian insurance market, we consider that the research objectives are achieved by highlighting the inclusion of this process in the specific coordinates of digitalization at European level.

The case studies that we present as successful achievements in the digital transformation of business insurance processes are implemented within the company that manages the compulsory home insurance in Romania (PAID Romania).

Literature review

Digitalization was possible due to the development of IT and communication in the multidimensional process of structural transformation (Castells, 2005). The reality proves that the opinion according to which the development of the informational societies of the emerging economies in Central and South East Europe is exposed to considerable risks, is more current than ever (Dragomirescu and Tighineanu, 2012).

The digital transformation according to which the change at the organizational level is fundamentally transforming an organization's business model and values differs from the previous theories (Riasanow et al. 2018). A review of the literature highlights the widespread use of the term "insurance digitization" to describe the process of using information and communications technology in this field (Lyskawa et al. 2019). The Covid-19 pandemic has accelerated the progress

in the digitization process, both in terms of the management of this process and the resources allocated. Insurance companies, due to the specifics of the activity carried out, had to be in the first wave of these changes. A strong opinion considers that, due to the pandemic, the digital transformation has become an integral part of society and the survival of companies (European Investment Bank, 2022, p.189). The insurance industry has had a slower start to the introduction of new technologies, but today, digitalization is acting unrestricted and generating major changes in the way we interact with customers, reorganizing the business model and reconfiguring products (Cappiello, 2020)

As we mentioned before, one of the fields where digitalization penetrated pretty quickly is the financial banking and non-banking industry. Based on the artificial intelligence support and the digitalization of facial recognition processes or biometric data, bank card data may be analyzed, for instance, a person who features in a picture may be recognized and the detection based on the previously mentioned processes (processing, adaptation) may be carried out as well, to see whether the user is the actual cardholder, which leads to the recognition of the real beneficiary of the data (account) in real time and from anywhere, hence avoiding bank fraud, travels, congestion or the need for brick and mortar facilities, designated especially for this purpose, including their maintenance-related costs.

In reference to the insurance industry, the implementation of digital innovations in this field is based on technologies which are actually developed in other fields of activity, but which are adjusted to the specific of this industry. According to Henrik Naujoks et al. (2020) based on a survey conducted Google jointly with the Bain company, using digitization solutions, the earnings of an insurer may increase by 28%, the costs of damages may decrease by 19%, whereas the administrative costs to contract insurance policies may also be cut down by 72%.

Digitization concerns the world of insurance practitioners, and large consulting firms periodically develop papers that bring together the views and experiences of managers of large insurance companies. Constantly, digitalization is identified with the force that radically changes business models.

Studies that start with the opinions of insurance practitioners are mainly focused on identifying solutions that are correlated in the strategy to ensure success in a competitive market. The concern of insurance practitioners for the digitization process highlights the complexity of this process and the fact that digitization will bring profound changes in the business models of this industry (KPMG, 2017).

The amplification of the digitization process in the insurance field is a reality that leads to the boost of competition on the market, it brings multiple advantages to the insurance companies, but, at the same time, it is considered that the big winner is the consumer of insurance products (McKinsey 2017).

Although insurers have focused primarily on digitizing the products distribution, for the near future it is believed that the management of losses will become the key factor that will generate change by promoting machine learning, advanced analysis and the Internet of Things (Naujoks et al. 2020).

A recent study conducted in the major European insurance companies found that five out of six insurers consider artificial intelligence to be an essential part of their strategy for the next 3 to 5 years (Matouschek et al., 2021).

The studies elaborated by the researchers of the digitization process in the academic environment, which correspond to a predominantly economic perspective, have as main preoccupation the identification of the correlation between the financial effort and the obtained

results. One of these studies, which aims to investigate the correlation between the volume of investment required by the introduction of digitization and the results generated by this process, encounters serious difficulties (Lyskawa et al., 2019).

A study based on the analysis of the annual reports published by 41 European companies listed at the stock market, for the period 2007-2017, highlighted a strong positive relationship between how the companies approach digital technologies and their performance (Bohnert et al. 2018).

Based on the data extracted from the notes accompanying the financial statements of the European groups, ranked in the first 4 places of the insurance industry, for the period 2008 - 2018, the increased interest of these companies for the new technologies was highlighted. At the same time, for the same companies, the analysis of the correlation between the gross value of the software acquisition and the volume of gross written premiums registered a contradictory evolution (Lyskawa et al., 2019).

Analysis of the digitization process of/for PAID Romania

In the context of the need to set up a single command center at national level to take over the management, the follow-up, the evaluation and the settlement of claims arising from a national disaster scenario (earthquakes, floods, massive destruction and landslides, etc.), PAID Romania strived to identify a viable solution, capable of responding in real time, of instantly scaling up in keeping with the increased intake of claims which may be submitted in such scenarios and, last but not least, of keeping under control the extremely high costs of accessing and/or operating a traditional support center.

Another issue which has been addressed and which should have been managed within this project was the fact that, even when such budgetary lines were to be earmarked, the issue of the technical and operational access could not have been solved, meaning that of having the functional command center up and running in the case of a major disaster scenario striking. Examples: the earthquake on March 4, 1977, the event at the Nuclear Plant of Chernobyl, that of Fukushima where the disasters' scope and direct manifestations impacted communication systems, transport, business life, the unavailability of human resources, the company and the specialized suppliers' activity made it impossible for long periods of time to carry on even the basic activities and services required to support such a center.

Case study #1: Using Artificial Intelligence and its Associated Digitalization Processes within the Pool of Insurance Against Natural Disasters - PAID Romania

Thus, based on these premises, the observations and conclusions drawn from the events mentioned above, PAID Romania addressed a technical solution capable of handling most of these problems in case such an event occurs, namely the virtual assistant Mara.

Mara is a solution that can understand vocal commands (voice2text), enables their exact filtering, solves large volumes of calls (spikes) generated either of major technical failures affecting a large number of customers, or of promotions (i.e. Black Friday, the "City Insurance" impact) or crises, without any human interaction.

Although similar technical solutions are available on the market which allow for the management of large numbers of customers in a small amount of time, what makes Mara special is the very purpose for which it was made, to which adds the complete lack of statistical data needed to operationalize it due to the fact that the sequencing of such events is rare and, when events of a

similar scale had occurred, technical solutions were not available, meaning there is no data which Mara could "assimilate".

It is well known that all AI solutions and digitalization solutions have a core system ("core", its most important part), which is represented by the machine learning module. This module carries out a type of "research" through which computers receive a huge amount of data, which is then analyzed, based on which the solution learns and (re)acts, without any specific programming being required. These "skills/abilities" are usually trained by thousands and thousands of interactions with customers in a daily recurrence business model, by specific typologies, namely repetitive scenarios that Mara CANNOT benefit from.

This particular element, i.e. the lack of sufficient data and predictability, and the difficulty of bringing relevant data to develop the technique required to code filtering scripts made PAID Romania create its own solution that allows the training and the development of the assistant. In short, it is realized in three ways: training on the job and stress tests.

Training on the job**:** as Mara acts outside the working hours or when the Customer Service Department is busy, as a virtual agent, it filters and solves the most common requests of the customers, thus "learning" the language, the accent, the specific words that relate to "business as usual." All these interactions, customers' requests are then turned into digital ones ("speech/voice2text" conversion"), automatically submitted to the departments assigned to provide complex solutions where the solution cannot be provided on the spot even by the virtual assistant (e.g. when does the policy expire?), after which it is returned to the customer also in an automated form.

Stress tests created by the team of specialists who anticipate situations similar to the real ones, loaded in and executed by a dialer (a robot that may place thousands of calls per minute) to reproduce scenarios of huge volumes of requests, amended and adapted to each test battery, depending on the observations and results gathered during the previous simulations, as well as those replicated following the conclusions drawn from the previous point (training on the job), at the same time, based on the analysis of the points mentioned above, in combination with the best practices in the industry and not least with the psychological and social surveys on human behavior, Mara benefits of permanent adjustment. This in turn ensures that the solution is equipped with all the tools and information needed to successfully solve unpredictable scenarios.

Results and discussions regarding Mara programme

Although there are a whole array of factors and indicators which may mirror the optimal functioning of such a solution, I believe that the ones listed below are the most appropriate to consider when evaluating the success of an implementation such as the virtual assistant Mara. We refer to this approach from a financial perspective, customer satisfaction and streamlining internal processes.

From a financial perspective, PAID-identified solution focuses on maintaining low costs while preserving or even exponentially scaling the capacity to provide services to its customers, the policyholders. Mara cuts down company overhead by 44% in business as usual (BAU) conditions as it operates both beyond the working hours and during the congested times) and by 60% in the case of a natural disaster scenario (Fig. 1 & Tabel 1).

Given the increased customer satisfaction - thanks to its intelligent and streamlined response aimed at efficient data collection, digitalization of communication between the company and policyholders requesting basic information and/or interaction with specialized departments by transforming voice2text requests, dispatching and prioritizing them according to their degree of

importance or severity have led to a dramatic decrease in the average speed of answer (ASA) to requests to 5 seconds as compared to the initial average of 30 seconds. In addition, an additional benefit is the 14% increase in efficiency (number of requests handled/total requests received) of the customer service department of PAID Romania since the first month of implementing this solution.

Analysing the streamlining internal processes - the implementation of modern processes, AI solution, the digitalization of communication jointly at every channel - the phone, ticketing, filtering, dispatching, SLAs monitoring platform both at cross-departmental and at cross-institutional levels led to the maximizing of the capacity of use and the streamlining of the technological and human resources. Using these solutions, the specialized staff remains available specialist staff remain available to deal with special situations, complicated cases requiring human interaction, critical and abstract judgment.

Tabel 1. Results after implementation of MARA Project

	Efficiency	Response time (sec)	Costs/month
Before Mara	84%	36.50	€ 850
After Mara	98%	29.30	€ 475
After Mara %	14%	-20%	-44%

Source: Data obtained according to the calculations of the author based on data of PAID.

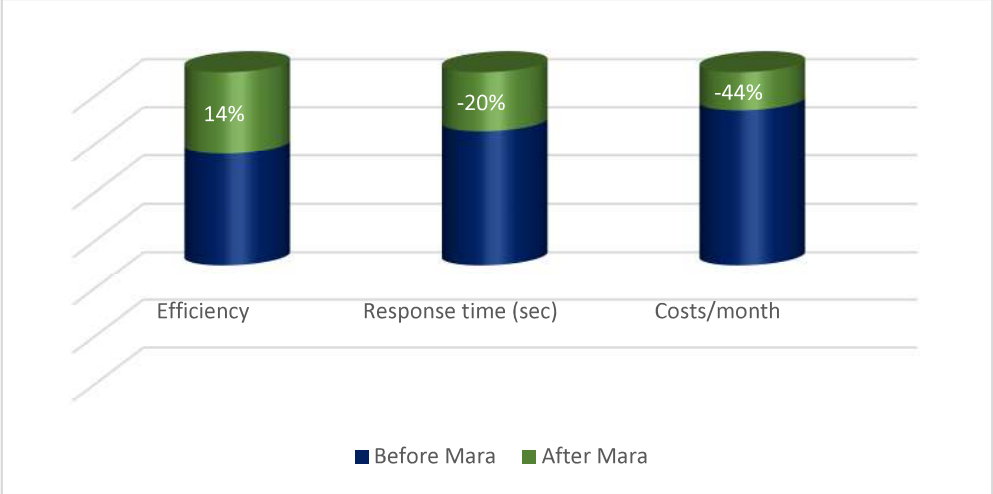

Figure 1. Results after implementation of MARA Project

Source: Data obtained according to the calculations of the author based on data of PAID.

Efficiency: The implementation of the AI Mara solution brought with it a 14% increase in project efficiency from the first month after implementation.

Response time (sec): It aims to efficiency take over the data and minimize the waiting time of customers (20% decrease in response time)

Costs/month: Mara reduces operational costs by resolving customer requests quickly, automatically resulting in a decrease of 44% (BAU) of costs generated by human resources needed.

Mara reduces excessive operational costs involved in the event of natural disasters scenarios (floods, landslides, earthquakes) by resolving customer requests quickly, automatically, with a

superior digital customer experience (-60% costs generated by human resources and infrastructure needed in such situations).

Table 2. Results after implementation of MARA

	Before MARA	After MARA	Automation %
No. of FTE's BAU	8	3	37.5
No. of FTE's for Disaster Scenarios	55	10	81.81

Source: Data obtained according to the calculations of the author based on data of PAID.

BAU – business as usual
FTE – full time equivalent resource

The virtual assistant Mara is able to receive and manage information/data which come through various channels and various sources: applications, emails, web forms, chatbot, Facebook, API, whereas the Microsoft connector is able to set up a shared space to work, to discuss and share data and documents and to conduct including queries into the company applications or data bases.

Monitored tickets – the possibility to set up an operational flow for tickets and incidents based on importance and severity, directly assigned to the department in charge with their monitoring, including channeling to a specialized person if needs be (chain ticket);
Automated replies: both the AI solution and the **process** digitalization simplifies the company operational process, the function considerably optimizing the response times. Thus, 35% of the repetitive activities and processes may be automated through the intelligent digitalization solution.

Optimizing Sales Performance and Conversion Rates Through Digitalization in The Insurance Industry

An additional challenge of the shareholders and business leaders has been added by the technological revolution of the last two decades, aggravated by the pandemic context of the last two years when almost each classical business model has been the subject of change or had to find solutions to cope with the new reality. The migration to online marketing and sales seemed for many the universal cure. Both are concepts with such an encompassing scope that it may be overwhelming all the more so as they have not been tested sufficiently so as to provide landmarks or standards. How do we know then what will be efficient for our company? The key to almost every industry seems to be, however, customers' experience**.** It is an extremely personal decision to trust an establishment from which you are not only buying products (which fall short of the category of "commodities"), but you also want to make sure that in exchange for the money you pay, it is going to protect you when incidents occur, this being the case of the insurance industry.

The last two years were nothing like the others in the context mentioned above. They have incremented the customers' expectations for digital solutions, readily at hand, to provide a customized commitment of the insurers - see the case of the health insurance policies. However, while consumers expect insurers to provide a digital experience with an added value which compares, for instance, with the "reflexes" practiced by the players in the banking field, many consumers are still unhappy or they do not believe that the insurance product is not something fancy or a service that is best addressed to companies, but a true safety net for each and every one of us when we are on the edge.

By adopting technologies, infrastructure solutions in keeping with the new trends, as well as solutions for business partners, insurers may overcome the traditional insurance proposal and may become proactive partners that can help (including educate!) their customers to manage risks,

to prevent loss and to improve their wellbeing from this perspective as well. In view of the statement above, we will further list, without being exhaustive, the main landmarks which may lead to an increased adoption and penetration rate of the products and services provided by the insurance industry.

Speeding up the "anywhere-anyhow-anytime" process, represented by the availability of products and services in the digital format. This manner of interaction leads by default to an increased level of customer satisfaction through the supply of a customized experience.

Preparing, adapting business to the new typology of customer/interaction and to the security trends that this manner of interaction presupposes/requires (i.e. the millennials whose appetite for online commerce is well known).

Building and strengthening an ecosystem of partners/channels. Besides the traditional channels made up of networks of brokers, consultants, direct representations, banks, the establishment of own, cutting edge channels, with specific approaches, must be the focus of any organization. We give here the example of digital performance (to attract customers) and the online shops (the new sales channel).

Product/service innovation digitalization: electronic policies, the availability of support-services supplied through omnichannel interaction (for instance, the customer may check the status of a claim file without showing up in person to a desk, just by going through various identification steps on a convenient channel: by phone, email, chat, applications etc.).

Extended concept of the insurer-policyholder relationship: omnichannel communication (see the example above), but also the establishment of a partnership relation with the customer;

customer retention - unlike the traditional models to earn purchase-based market share, significant effort and focus must be placed on retaining the customer in the network and

customer satisfaction and experience – continuous tracking of customers' satisfaction level as related to the supplied products/services. Separately, using the channels of origin, but also in the servicing points (i.e. claim files).

Case study #2: Model to Optimize Marketing Performance through digitalization within PAID – the Pool of Insurance Against Natural Disasters

In the last two years, PAID Romania strategy to increment customers' portfolio included improving and strengthening the traditional purchase channels and partners, diversifying and growing using digital marketing. This channel relies mainly on the digital performance component which aims especially at two critical features for any business: brand awareness and sales. Digital marketing comprises a whole array of strategies and technologies which when used, concur to reach online consumers, of which we give further the example of some of these employed in this case: SEO (search engine optimization), PPC (pay-per-click) and SSM (social media marketing).

SEO (search engine optimization) – SEO is aimed at ranking a company and its services - in this case in point PAID Romania and the PAD policy - as higher as possible in the Google search results, thus increasing by default the traffic of the search engine on the company website. To do this, words and expressions were checked which potential consumers use to look up online information. Eg. PAD policy, mandatory insurance, house insurance etc.;

PPC (pay-per-click) – a form of digital marketing which enables ads, commercials to feature at the top of a page or visibly on the laterals of pages with congested traffic (i.e. news websites, family websites, sites targeting consumers of economic, financial content etc.). Additionally, as PPC is usually a marketing tool with immediate conversion and just as long as the ad is present, the ads posted this way are actually landing pages that automatically redirect the

website directly on the proprietary online platform, which leads to a growth of the conversion rate. All the more so, landing pages are separately put up based on each category of customer profiled in advance based on various criteria (age, gender, digital profile etc.) in order to maximize the conversion rate;

SSM (social media marketing) - analysis is an important component of marketing performance which is done on social media. Thus, performances (conversion rates) are being recurrently analyzed with a weekly granularity. Depending on the performance recorded for the reference interval or background under review (e.g. during the Black Friday intervals of large retailers, consumers' appetite focuses on consumer products, during December 15 - January 15, the appetite for shopping decreases owing to the holiday season etc.), the strategy will change, for instance: investment will be accelerated in the intervals prior and subsequent to these time intervals whereas during the respective time intervals brand awareness campaigns may be implemented.

Results and discussions regarding marketing digitalization

In other words, marketing and sales through social media is a complicated tool which presupposes more than the simple management of a social media profile as a mix of creative thinking and objective strategy is a must. Last but not least, these methods do not yield results immediately and managers must have a long-term strategy supported by awareness campaigns, by a well defined and simple process of after sales contact of the customers and, not least, by consistency in executing sales campaigns on these channels.

In what follows, the authors show a six-month review of a campaign carried out by PAID Romania that provides proof for the overview made above.

Table 3. Six-month review of a campaign carried out by PAID

Reference interval	Monthly reach	% of Pre Go!Live estimate	Monthly traffic	% of Pre Go!Live estimate	CTR
Pre Go!Live estimate		1,184,120		24,525	1.00%
Month I outcomes	2,596,464	+119.27%	28,336	+15.50%	1.09%
Month II outcomes	5,341,240	+351.07%	55,414	+125.90%	1.04%
Month III outcomes	4,409,481	+272.38%	41,939	+71.00%	0.95%
Month IV outcomes*	2,126,805	+79.61%	14,038*	-42.80%	0.66%
Month V outcomes	2,138,298	+80.58%	21,241	-13.39%	1.87%
Month VI outcomes	1,087,443	-8.16%	23,523	-4.08%	2.16%

Source: Data obtained according to the calculations of the author based on data of PAID.

Table 3 shows the results in comparison with the estimates made before PreGo! Live (Estimate - 1,184,120 reach, 24,525 traffic):

In the beginning of the digital performance campaign, the main goal was set to be the brand awareness area, and secondarily the identification of the buyer's profile and the target segment for this channel (online shop). As may be seen from the evolution above, the targets have been exceeded since the first month of GO! Live. This was owed to the concerted manner of working and the aggregated surveys (landing pages made separately based on age groups with appropriate content, genders, interests etc), analyses and reviews, weekly corrections of the implemented strategies. As the initial target - the touch of brand awareness - had been exceeded since the beginning, as of month 4 the organization wished to transition to speeding up the sales process, a reason why the budgets used for the awareness area were invested in the conversion area. This led

to a natural decrease for the "reach" and "traffic" indicators, but also to remarkable growth of the CTR indicator, an indicator with direct impact on the conversion rates (CR). What is also worth noting with respect to this strategy is the evolution in month 6, a month which is completely "enviable" for the sales segment on this channel owing to its seasonal character (half of the month is deemed "dead", which is also highlighted by the traffic indicator, as it fares at half of the capacity delivered during months 4 and 5), a failure which the digital performance team managed to combat by focusing efforts and budgets on the "viable" half of the month, thus succeeding in preserving the performance aimed by the top management team for the sales area.

Table 4. Increase of sales MoM

Reference period	Number of policies	Reference	% increase of sales
Reference	**52**		
Month 1	56	52	8%
Month 2	91	52	75%
Month 3	111	52	113%
Month 4	160	52	208%
Month 5	149	52	187%
Month 6	151	52	190%
Total	718		

Source: Data obtained according to the calculations of the author based on data of PAID.

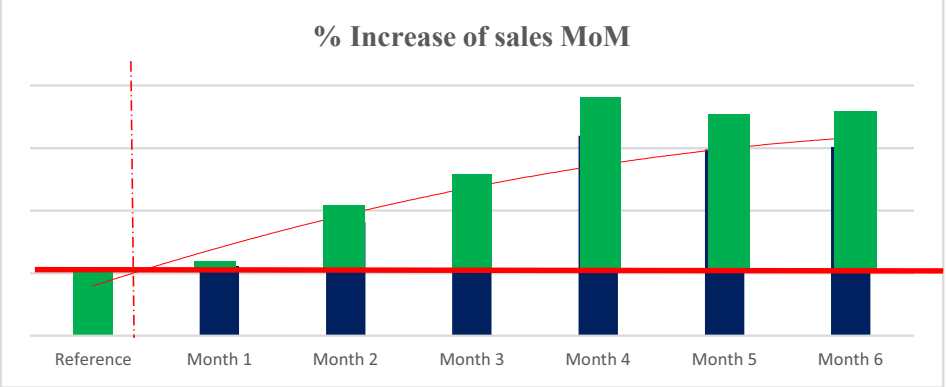

Figure 2. MoM sales evolution

Source: Data obtained according to the calculations of the author based on data of PAID.

In Table 4 the authors calculated the increase of month over month sales for a six-month period of time since in Figure 2 the authors design the six-month sales curve of evolution which follows the figures presented in Table 4.

Conclusions

The approach of the digitization process of PAID Romania highlights the development of this process based on a path that constitutes the rule followed at the level of the insurance field at international level. Thus, the major European insurance companies have taken a step-by-step approach to introducing new technologies that correspond to a value chain strategy. It started with

the allocation of increased resources for sales and distribution to increase the number of customers, and then the focus was on maintaining customers through its services. The critical field of investment targeting for digitization, in the near future, at the level of major European insurance companies, is estimated to be represented by the management of loss and will be focused, in large part, on technologies based on artificial intelligence (Matouschek et al. 2021).

Time when the turnover of a company, the business development, market share and penetration rate, respectively, as well as the MoM and YoY sales rate were achieved through traditional channels seem now not only long gone, but, moreover, completely ineffective. All the more so, as the business niche in which we operate is placed on an aggressively competitive market, with similar products and services and where there are no differentiators (anymore) even for the same demographics that have been "target audience" until now.

Thus, it is not only important but essential that players of any industry should revamp themselves to understand the trends, customers' behavior and needs to have their requests dealt with efficiently and to keep up with the entry of non-traditional players on the market in the competitive context of our time.

The speed of transformations in the "digital era" is that high that sometimes businesses depend on the speed of implementation of new technologies. More and more adapted to this era, customers are increasingly attracted by rapid services, with an increased quality and which provide them with the most original experience. That is why companies compete in adopting and implementing the latest digital information as soon as possible. Consequently, this decision increases customers' satisfaction and company financial performance. Equally, these benefits are accompanied by new risks, labor force shortage, cyber risks, unemployment etc., which will have to be addressed more responsibly.

Digitization is both the cause and the consequence of technological development in related fields that belong to the new economy based on an accelerated process of knowledge generation. The coordinated development of the process of digitization of the insurance field, based on a digitization agenda to be followed at the level of the insurance company, is a way to obtain an increase in commercial performance (Bohnert et al. 2018). This approach is also promoted by the way in which the European Commission has decided to get involved in the digitization process carried out in Europe as what has been called the "decade of digitization" for which it has developed a comprehensive program targeting the period 2020-2030. The EU's policy of transformation based on the latest technologies has led to the goal of building a European model of economy and society based on digitalization.

From the authors' perspective, the digitization process is a means that allows better performances so that the customers' expectations can be accomplished more rapidly. Moreover, jumping from promoting technological changes to creating a digital culture is considered a mandatory requirement for insurers (Naujoks et al. 2020).

References

Castells, M. & Cardoso, G. (ed.) (2005). *The Network Society from Knowledge to Policy*,Washington, DC: Johns Hopkins Center for Transatlantic Relations

Cappiello, A. (2020). The Digital (R)evolution of Insurance Business Models, *American Journal of Economics and Business Administration*, Volume 1: 1-13 DOI: 10.3844/ajebasp.2020.1.13

Bohnert, A., Fritzsche, A. & Gregor, S. (2019). *Digital agendas in the insurance industry: the importance of comprehensive approaches*. Geneva Pap Risk Insur Issues Pract 44, 1-19 https://doi.org/10.1057/s41288-018-0109-0

Łyskawa, K., Kędra, A., Klapkiv, L. & Klapkiv, J. (2019). *Digitalization in Insurance Companies,* DOI:10.3846/cibmee.2019.086

Riasanow, T., Setzke, D. S., Hoberg, P. & Krcmar, H. (2018). *Clarifying the Notion of Digital Transformation in IS Literature: A Comparison of Organizational Change Philosophies,* http://dx.doi.org/10.2139/ssrn.3072318

Dragomirescu, H., Tighineanu I. (2012). *Risks Affecting the Development of The Information Society in The Republic of Moldova: Insights from A Delphi Survey*, BCI '12: Proceedings of the Fifth Balkan Conference in Informatics, Pages 82-87 https://doi.org/10.1145/2371316.2371333

Comunicare a Comisiei Către Parlamentul European, Consiliu, Comitetul Economic Și Social European și Comitetul Regiunilor Busola pentru dimensiunea digitală (2030). Modelul european pentru deceniul digital, Bruxelles, 9.3.2021 COM (2021) 118 final, Retrieved from https://eur-lex.europa.eu/resource.html?uri=cellar:12e835e2-81af-11eb-9ac9-01aa75ed71a1.0018.02/DOC_1&format=PDF

European Investment Bank (2022). Investment Report 2021/2022: *Recovery as a springboard for change.* Retrieved from https://www.eib.org/attachments/publications/economic_ investment_report_2021_2022_en.pdf

Matouschek, G., Dreyer, D.& Kohler, T. (2021). *Accelerating the digital transformation. Three recommendations for the European insurance sector to unlock the full potential of the digital transformation*, Retrieved from https://www.strategyand.pwc.com/ de/en/industries/financial-services/accelerating-the-digital-transformation/accelerating-the-digital-transformation.pdf

Naujoks, H., Mueller, F., & Kotalakidis, N. (2020). *Digitalization in Insurance: The Multibillion Dollar Opportunity*, Bain & Company, Retrieved from https://www.bain.com/ insights/digitalization-in-insurance

KPMG (2017). *Clarity on Insurance Digitalization, Achieving agility: Towards a new business model,* Retrieved from https://assets.kpmg/content/dam/kpmg/ch/pdf/clarity-on-insurance-digitalization-en.pdf

McKinsey (2017). *Digital disruption in insurance: Cutting Through the Noise* ,Retrieved from https://www.mckinsey.com/~/media/mckinsey/industries/financial%20services/our%20insights/time%20for%20insurance%20companies%20to%20face%20digital%20reality/digital-disruption-in-insurance.ashx

Ipsos and Internet & Mobile World (2019). *Digitalizarea în mediul de business din România – Studiu de percepție*, https://gotech.world/digitalizarea-in-mediul-de-business-din-romania-in-2019-studiu-de-perceptie/