

Factors influencing employee' technology adoption in HR

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Abstract

If a set of individuals is exposed to the same technology, the emotional response is different and even more, the adoption degree is different. Given the increased presence of technology in our life, what motivates individuals, in general, to adopt technology faster and what triggers a positive emotional response in their relationship with technology? Our research aims to bring additional evidence that companies can operate studied changes to increase their employee' adoption of HR technology in early stages, by reducing the alternative channels meant to handhold users and ensure access to the human resource function services. The results would benefit companies to redirect funds to focus more on adopting and personalizing technology that has a higher chance to be easily embraced by employees, especially in human resources domain, where digitalization is also perceived as a de-personalization of the function, making employees even more resistant to change.

Keywords: employee experience, technology adoption, innovation, alternative communication channels

Introduction

In understanding humans' relationship with technology, we must consider the entire journey. From rudimentary tools to today's artificial intelligence, our evolution has been shaping our behavior in relation to technology and changing expectations from technology.

Furthermore, we cannot talk about technology if we don't introduce the 'self-service'¹ concept, largely leveraged from retail – in 1916 Clarence Saunders revolutionized the shopping experience, by giving shoppers freedom of choice and reducing personnel costs, opening the Piggly Wiggly store in Memphis, Tennessee (Freeman, 2011).

Starting with 1980s, the use of ATMs (automated banking machines), self-check-in, some check-out features in some stores in the United States, shaped the customer behavior and opened the

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¹ Self-service is an approach (be it system or process) where individuals perform tasks or access a service on their own, without direct assistance from others.



perspective of empowering users to reduce the waiting time, to use the technology at their own pace, while making use of the service according to their availability (withdraw cash, for example).

The first commercially successful personal computers have been vended in 1975 – “Altair 8800” – in a kit form, for enthusiasts to assemble themselves. The aim at that time was to create a machine easy to interact with from a hardware perspective; there was less focus on friendly interfaces or complex operations. Having a personal computer was attractive from a social status perspective, from a cognitive perspective – knowing how to make use of technology – and was seen more like an empowerment tool. The simplest input-output relationship with the computer, without too much interaction of the tool with the user, has been sufficient for many years. If we look at the use of computers in the organizational space, up to the personal computer era, the specialized personnel had access to centralized computers, in part because of the cost of hardware and in part because of the limited pool of resources with knowledge. So, one can tell that it was a privilege to operate a computer-based technology.

In the early 80's, when computers became quite popular, and population had access to a personal device - still limited to those who could afford one but also who could make use of it – organizations started to equip their staff with individual computers. The focus moved slowly to creating documentation on use of computers, knowledge being limited still. An important limitation that characterized the hardware era has been data storage – locally – that prevented users from collaborating in real time with peers from distance.

Also, the internet made technology self-service a big part of our day-to-day life – online banking, e-commerce, etc. – and developed the need for individualized experiences.

The fundamental shift came with the transition to cloud-centric era. With having access to cloud data and opening the collaboration channels fully, the evolution of technology changed our perception over usability and power associated with its cognitive value. Neuroscientists' opinion about adoption is connected to brain's preference for collaboration and efficiency and this is exactly what cloud-computing brought. Adoption increased dramatically not only at personal level, but organizations started a fast-track race to moving everything to cloud. It is this shift that had a major impact over focus of designers and developers, so from now on, the focus is on *user experience*.

This evolution of computers and the internet enhanced not only cognitive collaboration between specialists but offered organizations the possibility to create a virtual space for their employees, virtual space that changed not only the work behavior, but also changed the perception over their life at work.

As the Human Resource function of the organizations started to play a crucial role in the era of digitization, technology also started to mediate the interactions between HR Specialists and Employees and quickly became the focus of the leadership. Creating a virtual space to foster collaboration and engagement, organizations started to investigate plugging more employee tasks into the digital space, life at work being now handled by the systems – like annual leave requests, references, time and attendance, bonuses, all one can think of.

One decade has been spent helping organizations to shape self-service and technology adoption strategies, constantly focusing on how to achieve more efficiency, because, in the end, employees will have to utilize the technology to fulfil their responsibilities in relation to their employment. In all cases, adoption of the self-service (technology) comes late, after spending a huge effort on educating, handholding, ultimately forcing self-service utilization.

While companies focus on increasing customer loyalty, they now must focus on employee loyalty too, through engagement strategies. Having access to employee surveys of different companies, we noticed one major concern that would stand out every time – technology. Even technology companies have the same challenge – employees feeling demotivated or less engaged because of technology.

What happens when we fail to use technology or when technology fails our expectations? How is this shaping our behavior and how much is this influencing adoption? What if we identify some key indicators or factors that can predict technology adoption and help us make better decisions in selecting features and tools to ensure we maximize self-service to get the return of investment?

This study started from the need to improve adoption of HR Technology and thus the self-service associated, by employees of companies, to reduce the human interactions for improved quality of service and cost efficiency reasons. On the one hand, it is challenging to deal with increased number of calls/chats/emails in initial phase of implementing technology (HR portal), and, on the other hand, it is not cost efficient because the service provider must invest in securing a buffer pool of resources to enable learning and also good quality of service.

1. Literature Review

In analyzing the adoption of technology by humans in general, literature considers few factors that have a major influence: accessibility of technology, consumer behavior in relation to technology, quality of service (efficiency, speed, convenience), cultural background (Minsky, 1987; Norman, 2003; Chevalier and Buckles, 2013; Sidhu and Doyle, 2015; Quality, 2024).

Starting with 21st century, accessibility hasn't been an issue any longer for international businesses, their workforce being equipped properly with devices to enable large scale communication and access to data. Users have been experiencing tools and systems that were enabling them to make decisions, be more efficient, discover new risks and needs, so a major up-skilling process has begun. It is exactly this start of the journey that opened new doors to explore how technology use is shaping human behavior and what triggers humans to use technology and moreover, what motivates them to self-service.

If we explore the consumer behavior in relation to technology, besides the historical overview already presented (Minsky, 1987), suggested technology needs to be relatable to humans, capable of displaying problem-solving and learning capabilities, besides being accessible, efficient. Hence, we can at least assume that self-service will be successful if user interactions that fail will not be repeated, features will be available at all times, reducing frustrations associated with humans not being properly educated or qualified to use it (we have been exploring and learning by doing).

According to Pamela McCorduck (2004) the machines will surpass the human cognitive abilities, and employees will have to become more adaptative, collaborative, and only the 'anthropomorphism' such as personality traits will trigger emotional connections to enable all this – 'behavioral mimicry' understood as natural language, emotional expression to create more intuitive user experiences.

On the same tone, emotional engagement – visceral and behavioral design (Norman, 2003) is based on immediate reactions of technology to user's needs, reducing cognitive load and frustrations. Hence, we can assume that users will adopt technology if they relate to it as being human-like, encompassing human attributes, allowing them to build emotional meanings that resonate with their personal values, aspirations.

It has been only in 2014, 10 years later, that 'Alexa' – virtual assistant developed by Amazon - has been introduced. The individualized Western societies embraced the product for better productivity and efficiency, while societies that prioritize collectivism might take longer to adopt new technology. In 2021, Amazon announces 'Alexa will enter the age of Self' (Prem Natarajan, 2021), becoming more self-aware and more self-learning, which brings the idea of anthropomorphism that blurs the lines between the human and machines. This not only raises some ethical questions but can also lead us to consider the concept of 'uncanny valley', according to which the more human the technology appears to be, the less likely is for the user to adopt it or stay loyal. People seem to develop a repulsion if technology is too human like – may be because of fear of losing control, may be because of need for privacy or just the instinct of preservation.

Internet of Things (IoT), cloud computing, big data, and, lately, social media revolutionized business models, providing new perspectives on how to use technology to foster growth, both to business and individuals as professionals.

Inder Sidhu (2015) emphasized the importance of same set of factors mentioned above while also adding the competitive advantage to the list – in the IoT era it is important to attract users with unique or new features, as we are still exploring technology. Competitive advantage can be excluded from the study because utilization of systems to complete employee tasks is not optional, hence, this factor is not contributing to higher adoption and it doesn't make sense from a financial perspective (companies focus on generating revenue, hence on end user experience, rather than employee experience).

On the other hand, but not opposed, Professor Leslie Willcocks (2016) emphasized the opportunity technology has brought to businesses and the need for re-skilling and up-skilling so that humans make most use of technology in a self-service model. The routine tasks will be automated in the end and users of technology will only operate complex ones. Hence educating them and preparing them for the future will be the key to success. Also, even before the pandemic, automation and robotics will re-shape the workplace, transforming it into a more dynamic one, without boundaries of space and time – remote and flexible. Technology will augment humans, helping them reach their full potential and go beyond – creating new possibilities.

2. Methodology

Technology is continuously evolving, and developers work with Agile methodology². In technology, well defined plans are only around the platforms, tools and systems to be used, the technology landscape and the integrations to be built, but then the functionality of the tools and systems is not documented a priori, part of the plan, but it is documented in real time, as the technology implementation and configuration happens (Ionel (Butnaru), 2024). It is precisely to allow developers to explore the technology capabilities and allow integration of improvements that come from testing and experiencing the tools. Agile is not just about being flexible but also about a mindset that fosters collaboration, efficiency, and continuous improvement (Appelbaum, 2023).

In social sciences, a similar approach in terms of managing change from within and follow a more adaptable path to implement a change, is represented by Action–Research. Moreover, this

² Agile methodology is a project management and software development approach that emphasizes flexibility, collaboration and customer involvement. It involves iterative cycles of planning, executing and reviewing allowing change adoption and improvements on the way.

methodology applied by 'internal resources of an organization seeking to inquire into the working of their own organizational system, in order to change something in it, can be considered or understood as undertaking insider action-research' (Shani and Coghlan, 2013). Action-Research, as a method applied in the workspace, was inspired by Kurt Lewin, a renowned German American psychologist based in the USA, a pioneer in the field of psychology applied in society and organizations. The method can be applied in any situation of change in a phased manner, based on 3 steps – planning, action, and evaluation/research – and in a democratic organizational environment, will promote critical thinking and collaboration. Nowadays, the methodology most often applied in technological projects is Agile, a methodology based on the same principles. But technology alone can't bring the big benefits. It has been mentioned in the previous sections that the world of training has most easily adopted these innovative methods and multiple controversial theories around which the most advanced organizational structures in the world have been built. Collaboration and immediate action are the key components to adapt solutions to the current dynamics (Ionel (Butnaru), 2024).

In the context of HR Technology, finding the right approach to study how human touch or humanization of technology might influence adoption, must be linked to both technology and people. As suggested when analyzing the key performance indicators, we cannot study the technology or the people only, as we need to identify a way to study both and ensure some level of alignment.

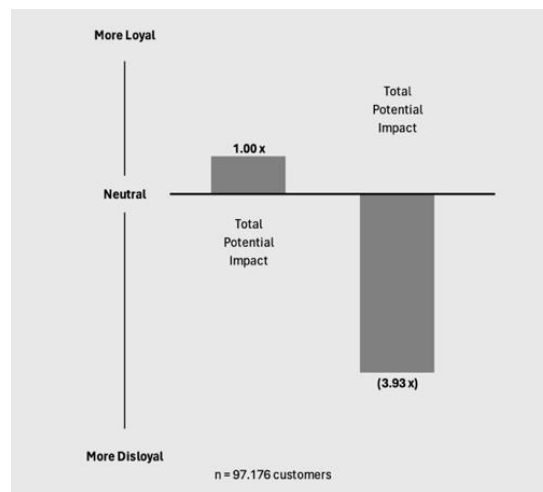
3. Findings and Discussions

To reiterate the objective, the study started with the need to improve adoption of HR Technology and thus the self-service associated, by employees of companies, to reduce the human interactions for improved quality of service and cost efficiency reasons. Customer Satisfaction Score has been always challenging to sustain, since the employees reaching out to service center have been failed by technology most of the times. Dealing with irate customers/employees³ is not an easy job. Especially when launching the service to a customer, it is taking a lot of effort to maintain the service quality standards. Humans need time to learn processes, to learn how to navigate systems, and it takes more time to become proficient and be able to help others navigate. Especially when working with unexperienced resources (economical advantage), it takes time and creative learning modules and

³ Irate customer/employee is an individual who is extremely angry or upset, typically due dissatisfaction with a product, service or experience overall.

practice to bring them to the level needed to secure the quality of the service. The actual educational system does not prepare workforce ready to be deployed without proper training. Hence, reducing the human interactions would not only diminish the risk to fail on customer satisfaction rate, but would also help achieving the objective associated with technology use – in the end, we implement technology to be used.

Figure 1. Impact of Customer Service on Customer Loyalty



Source: Dixon, Toman, and DeLisi, 2020

It may be precisely because of the technology failure to meet customer expectations, that we do not meet the Customer Satisfaction Scores. The customer behavior and expectations changed over time and, as technology plays a more important role, we expect to get things done in the systems, not having to be assisted by humans any longer.

Being assisted by humans might mean we failed to make best use of technology, which is completely changing our expectation from our interlocutor (the service center representative) – disappointed consumers are almost 4 times more likely to lose loyalty over a service and thus share their feedback with peers – as shown in the first chart (Figure 1).

The data used for the purpose of identifying which factors influence most the adoption of technology has been aggregated from all systems used in time⁴, to help understand what triggers the end user behavior in relation to technology. The data has been collected during 2012 – 2019, from 7

⁴ Systems of reference: database consists of reporting tools, ticketing systems – in house grown or licensed, surveys. We exported data from all existent systems into excel and analyzed with Power BI. The data has been limited to the 7 companies included in this study. Reports showing type of queries handled by service center, reports showing unique users accessing the service, type of channels for all queries, quality survey results have been included in this study.

companies with a number of employees ranging from 18.000 to 130.000, in the early stages of the service/technology adoption and ongoing, for each particular case, as shown in Table 1.

Table 1. Metrics analyzed to determine main factors influencing adoption of technology

Change Management
Navigation queries out of the total number of queries received by the service center.
Process queries out of the total number of queries received by the service center.
Technology Use
Unique users who accessed the service center through all channels.
Alternative channels
Queries retrieved via portal from total.
Queries retrieved via chat from total.
Queries retrieved via phone from total.
Queries retrieved via HRBP from total.
Alternative channels
Quality Satisfaction Survey Score

Data analysis – descriptive statistics - has been instrumental in calculating the weight of the 4 notable factors (using mean, median, average from total) that are influencing the adoption of technology:

- Existence of alternative communication channels (HR Business Partners accept to take queries from employees in face-to-face meetings and/or email/chat/phone is still an option);
- Technology itself (novelty of technology or additional technology to the existing one, in our research we do not have data on perception over technology quality and it is not relevant to the study, however technology itself or the reason users adopt technology as a primary option should be studied and it is part of future research);
- Change management quality (how easy did we make it for users to understand where to go, what process to follow, how to utilize technology);
- Quality of the service center (human representatives providing support in navigating the portal or acting on behalf of the user).

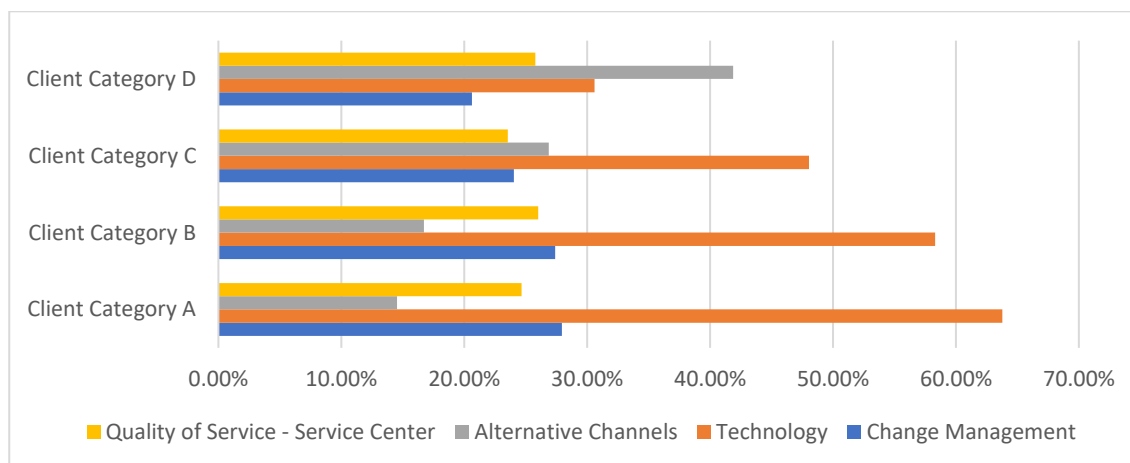
Also, after analyzing the profile of the seven companies, we could streamline four categories, based on the similarities, considering the “personas” that have been used when implementing the technology and service:

- Category A (1 client – number of employees: 22.000): Professional Services Practitioners, highly skilled in use of technology, highly skilled in business process improvement area, accustomed to systems and navigation;

- Category B (2 clients – average number of employees 60.000): IT Professionals, highly skilled in use of technology, highly skilled in technology development, accustomed to systems and navigation.
- Category C (1 client – average number of employees 18.000): Highly Specialized Professionals (e.g. healthcare), highly skilled in use of technology, accustomed to systems and navigation;
- Category D (3 clients – average number of employees – 18.000): Professionals in Logistics and Production, with some skills in use of technology, not very used to systems and navigation.

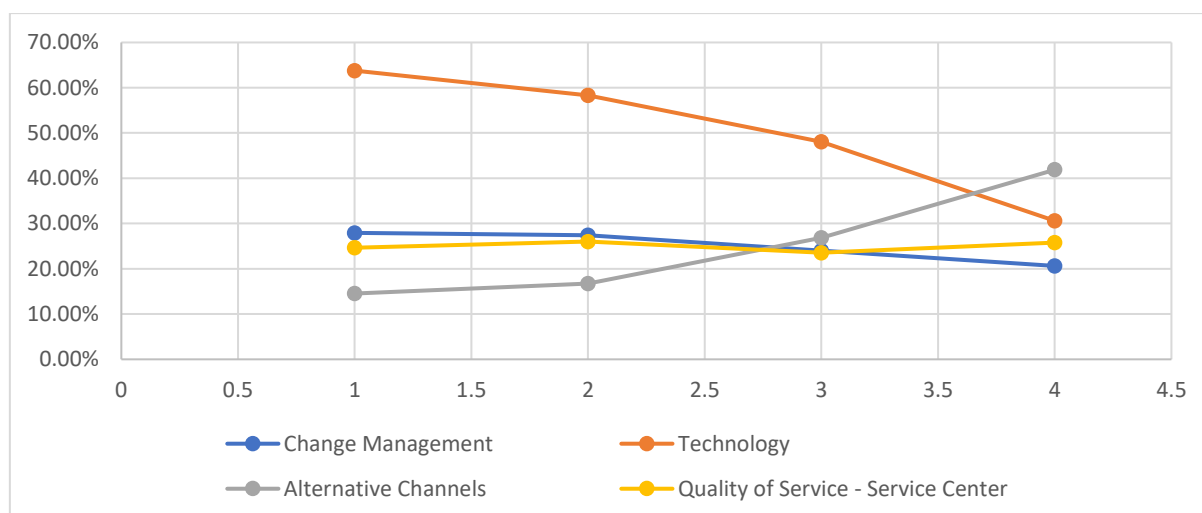
The total population – our sample – consists of approximately 235.000 employees from 72 countries, and since this study is limited to factors influencing adoption of technology from a global perspective, we did not consider demographic data. The KPI data aggregated to help analyzing the impact of each factor out of the 4, can be seen below in Figure 2.

Figure 2. Major factors influencing technology adoption



Source: own representation

Although the weight from total is equal for 2 factors – change management and quality of service, technology stands out (average of all clients); also, the variation chart below (Figure 3) is showing that the 2 factors that are deviating the most from the average, for some clients, are alternative channels and technology use seen as quality of technology. And these factors are interdependent – if there were no alternative channels, technology would be used. It would be interesting to investigate in a future study a scenario in which if technology were to meet end user expectations, the users would still access the alternative channels.

Figure 3. Variation chart of major factors influencing technology adoption

Source: own representation

In the above figure it can be observed how technology as a factor influencing adoption is standing out, at least in the first 3 years from deployment or change, being the major contributor to individuals embracing the self-service. However, existence of alternative channels becomes more and more important after the 3 years from deployment as users become more customized with their practicality. Change management and quality of service are stable, contributing by 20-30% to the overall adoption.

In Client Category A, although the employees can still make use of traditional channels like email, phone and HR face to face, technology adoption is higher than in Client Category D, with access to the same channels, which shows a direct correlation between the profile of user and technology adoption. Also, the day-to-day activity might influence the type of channel used – in category A (professional services) the employees make use of laptops/computers more often than Category D (logistics and production), hence accessibility to systems is different.

In 2017 a workshop has been conducted with a client in Category D (logistics and manufacturing) to understand what could prevent employees from using the technology if the portal is user friendly and intuitive. The conclusion of the workshop has been enlightening – not all the users had access to smartphones and not all the users had a personal laptop, hence, alternative channels were a must for this category of people at least until smartphones become accessible to all people. As a side note, in 2023, another client from this category, willing to invest to obtain high adoption levels (not included in the data) decided to equip all its employees with smartphones to enable access to technology. It would be interesting to see, subject to further research, if adoption increases (the customer is still in the implementation stage).

If we exclude Category D from the data analysis, alternative channels and technology use still stand out from the rest.

Table 2. Use of HR Technology during first 3 months of implementation

	Client Category A	Client Category B	Client Category C
Technology use	63.78%	58.32%	48.06%

Use of technology, especially in the first months of deployment – it usually takes 6 to 9 months to stabilize the systems and have users accustomed – was not getting close to 60%-70% (as shown in Figure 4) which would have been the objective (again, we are talking about 2012 – 2019).

Technology use has been determined based on the number of unique employee transactions (meaning unique employee as user, independent of the number of transactions) during the first 6 months of the deployment, without any support from the alternative channels (HRBP, Service Center).

The data for 3 years after deployment of technology (for all client categories) has been showing progressive improvement in technology adoption, like in the chart below (Figure 5).

Figure 4. HR technology adoption rate over 3 years after implementation



Source: Own representation

The category of clients that stands out is D, specifically because of access to smart devices of the employees working mostly in logistics and manufacturing, obviously for them technology/portal being a personal (may be from financial reasons, but this must be further analyzed) choice among other channels (HRBP, phone). Even if intuition would say phone call would be preferred over face-to-face meeting with HRBP, for this type of employees initially the preferred channel was the latest. Worth thinking about how technology mediated the relationship between employees and HR would

substitute the direct human interaction – hence my interest for “human touch in HR technology”, the subject of my PhD thesis.

What is interesting is that the linearity of the adoption for this category of employees is perfect (average of 11% year over year increase in adoption), and we learned that this type of employees would not necessarily have an annual appraisal, their performance being measured in terms of conduit, professional behavior, productivity, but outside of any systems. Hence, we will exclude again, Client Category D from my further research.

What we can observe in the chart (Figure 4) is that most of the employees get to use the system fully by the third year, in their third year coming to the service center only to resolve technical issues they encounter but also raising new queries that haven't been raised before – to resolve this, the service center developed “most frequently asked questions” (FAQs) documents/library to share best practice within the team, a living document, improved with each new inquiry.

Increase in use of technology was expected, especially because we had a high number of volunteers – 1,6%, seen as early adopters of new technology – for testing the new portal. Also, change management in large international companies is taken seriously (although critics would argue it can always be improved) and guides and manuals are being published continuously with every change.

Alternative channels must be available, especially given the nature of services provided – human resource – that could have a massive impact on employee engagement. So, it became important to analyze what type of queries related to navigation (handholding the user to use the technology) the service center handles, to improve technology in those specific areas, to resolve the problems that could prevent users from adopting technology (like disappointing experience feedback spread through word of mouth).

Table 2. HR technology adoption rate (3 years monitoring)

	Client Category A	Client Category B	Client Category C	Average Increase
Technology Use				
- 0-6 Months	63.78%	58.32%	48.06%	13.69%
Technology Use				
- 6-12 Months	78.23%	71.12%	61.87%	13.69%
Technology Use				
- 12-24 Months	94.33%	87.50%	78.34%	16.32%
Technology Use				
- 24-36 Months	100.00%	100.00%	94.70%	11.51%

An analysis on the type of transactions during the second year, revealed that client categories A, B and C, conducted yearly appraisal cycles that somehow forced the employees to utilize the

systems and hence, an increase of 16.32% has been accomplished. The number of transactions associated with annual appraisal was specifically 4.02% out of the total transaction volumes, which may explain the peak in the linearity of adoption (Table 2).

Services companies, and not only, have the tendency to intuitively apply action-research methodology, without being conscious about it. There is a culture to constantly improve metrics, to constantly strive for better performance; hence, improvements to the systems and services are applied, after remediation plans are being discussed in multiple forums, with professionals from all areas of service – quality, data analytics, operations management, client management, even the client itself. In most of the cases, the proposer of the plan will incorporate the feedback resulted from the “democratic dialogue” between all stakeholders.

After discussions in different forums (quality, training, operations, business intelligence), based on collected data and financial impact of each set of measures, we concluded we needed to look at reducing the channels to contact service center, to transfer the budget spent on resources handling phone calls to technology enhancements.

“Cut the old roots” metaphor seemed to resonate with most of business leaders, hence we started analyzing the preferred channels of employees, to eliminate the less preferred ones, to observe. We decided together with one customer (Category A customer) to pilot switching off the phone lines, given that only 8% of the employees were using this channel, compared to 12,45% who already preferred chat.

One should never take the risk to disable some of the alternative channels without analyzing the technology use factor, especially in HR, where employees need to have access to their data, fulfil some duties, feed the systems to enable payroll process completion. In all surveys, employee satisfaction is mostly given by the level of compensation, hence, an issue in their compensation and benefits would be catastrophic. Before disabling some of the alternative channels – although some like chat and phone can be also highly automated, we need to understand why technology usability is low in first 3 to 9 months and how it can be improved, so we meet our collective objectives – customer satisfaction & profitability.

Being assisted by humans might mean we failed to make best use of technology which is completely changing our expectation from our interlocutor (the service center representative) – and this is exactly what we were going to solve for: moving the focus from service center to technology, by reducing channels of communication, starting with phone.

Once decision has been made (February 2019), plan for switching off the phone lines has been presented to leadership of both companies – customer and provider – and we collectively embarked into the journey.

On 30th of April 2019 we switched off the service center phone lines for all employees of our customer, exception being made for emergency calls related to employee incidents (employee relations). Part of the resources handling calls for the customer have been redeployed to augment the chat team; in case the channel will face increased volumes due to the change. The volumes of queries that reached the service center decreased overall because of the change – although there has been an increase in volumes for chat team and for HR Business Partners too – for the first 4 months, starting the descendent trend as employees started to get more familiar with portal. As shown in Table 3, chat queries increased by an average of 2,10% for the first 3 months, showing that a portion of users who were previously calling for help, used an alternative channel to access the service or get guidance on how to use the portal. Another increase has been noticed in the queries coming through HR Business Partners who have been then trained to not raise tickets or to not resolve queries on behalf of employees if the technology was accessible to them and they had guides to do it themselves. The HR Business Partners managed to reduce the percent of queries to a lower level than before the phone switch off in 6 months.

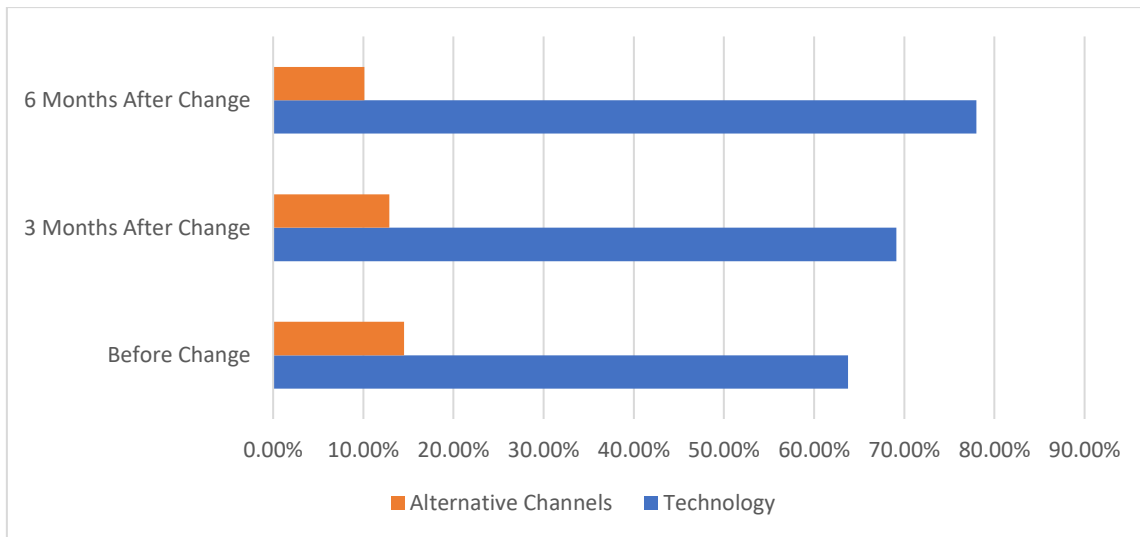
The most important aspect is that we could see a significant increase of 5,22% in the first 3 months and another 3,68% in the following months, so that a total of 8,9% was achieved, showing that employees were adapting to the new settings.

Table 3. Source of queries after phone lines closed

Client Category A	Before Change	3 Months After Change	6 Months After Change
Queries retrieved via portal from total	64.11%	69.33%	73.01%
Queries retrieved via chat from total	12.45%	14.55%	12.12%
Queres retrieved via phone from total	8.00%	0.00%	0.00%
Queries retrieved via HRBP from total	15.44%	16.12%	14.87%

Analyzing the channels separately to understand the impact of the change, proved that steps to increase the use of technology can be taken, one by one, to allow re-distribution of resources to technology improvements, given that employees must use it in the end to complete their employee duties. Below bar-chart (Figure 5) shows the direct correlation between removal of alternative channels and use of technology.

Figure 5. Technology use after reducing alternative channels



Source: Own representation

Another dimension that we need to consider in consumption of service, or utilization rate, is related to necessity – if an action is necessary, or mandatory, as part of the employee duties, the struggles associated with use of technology or service overall are disregarded; completion of the task itself is rewarding and any struggle is forgotten. If we take the payroll tasks, as example, they are mandatory for employees, but they are also necessary from a motivational point of view, because employees must fill in a time and attendance form as required by company, but they have the motivation behind too, as they want to get fully paid for the time worked. They might struggle with the system, but they will do their best to complete the task, removing all barriers.

Thus, reducing alternative channels, although in HR services provided to employees might be beneficial from a cost and quality of service perspective, should be limited to this domain and these circumstances, as it can impact the perception over the service overall if applied in another domain. And this is specifically because employees have some level of obligation associated with their tasks, that cannot be transposed to regular clients who access any type of services. I chose to use ‘some obligation’ instead of absolute obligation due to existence of restrictions, in some countries, to mandate employees to perform some tasks in systems or at all.

Conclusions

Coming back to the objective, the study started with the need to improve adoption of HR Technology and thus the self-service associated, by employees of companies, to reduce the human interactions for improved quality of service and cost efficiency reasons

Technology journey we all embarked in is continuously evolving. All companies want to reach that state when administrative tasks or repetitive tasks that add no value to the business or to its employees are 100% automated. We all want to simplify processes, we want to reduce cost, we want technology to really augment humans.

Resource scarcity is one of the most pressing risks companies must deal with now – and it is not only the demographic concern but also change in expertise needs, re-skilling being now more usual than ever before.

It is imperative to analyze how companies can use their resources for more complex and added value work instead of repetitive work. Also, it is imperative to analyze how companies can increase the use of technology in the absence of budgets allocated to administrative functions and/or processes.

Analyzing the factors that contribute the most to human resource technology adoption by employees of companies, we can highlight one that can be a short-term solution and can lead to early adoption during the transition to digital space – alternative channels.

When implementing technology, companies should define the personas – employee types or categories – and the preferred communication channels. They should try to reduce them to a minimum, making sure at the same time that the ones selected are available to all their employees (not all channels could be available to all employees, but employees should have access to at least one alternative channel).

Reducing alternative channels will enable more focus on quality of technology: reducing the data analysis perimeter, reducing training investment, reducing the cost with resources associated with the channel, will put the emphasis on technology and that is the 'channel' to be continuously improved, based on new user expectations but new advancements too.

Our study has its limitations and that companies should analyze user behavior prior to making any decision, because of the nature of human resource services involving some obligation. Nevertheless, if companies need resources to enhance technology or if they lack resources to handle the alternative channels, we proved that a controlled reduction of channels (through data analysis and change management) can bring the efficiency expected and support redirection of focus.

We did not see a significant impact on customer service satisfaction, and it might be that part of it is because we switched off the less used channel so not enough critical mass to influence the overall scores, part of it because the pandemic changed perspectives too. we cannot draw a conclusion on this without deeper analysis, but it is important for our study to conclude that removing less used alternative channels will not have a significant impact on user satisfaction.

Our study aims to offer a solution to improve technology adoption in companies that lack financial resources to invest in technology quality. Independent of area of life - work, education, leisure, etc., technology design is important, and the more designers focus on technology friendliness, efficiency, accessibility, the higher the adoption level will be. It would be interesting to go beyond and understand what keeps them loyal to a technology over time – is it attachment, confidence, routine, or fear of change; or understand if they are inclined to like more adaptive technologies that introduce enhancements step by step and take the users along in the journey?

On the other hand, it is imperative to understand up to what level technology is to be humanized to ensure adoption and loyalty of user, to avoid falling into the ‘Uncanny Valley’ – ‘the closer something gets to looking human but stops right before it reaches a realistic look, the more it falls into the uncanny valley’ (Alexander S. Gillis, 2024), influencing the user to reject the use of the technology.

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Appendix 1. Gender

	Valid Percent	Cumulative Percent
male	38.0	38.0
female	62.0	100.0
Total	100.0	

Appendix 2. Age in years

	Valid Percent	Cumulative Percent
Under 18 years	8.0	8.0
18-25 years	53.0	61.0
25-40 years	19.0	80.0
40-55 years	18.0	98.0
over 55 years	2.0	100.0
Total	100.0	

Appendix 3. Current level of education

	Valid Percent	Cumulative Percent
secondary education	1.0	1.0
high school	22.0	23.0
university	71.0	94.0
postgraduate studies	6.0	100.0
Total	100.0	

Appendix 4. Monthly income

	Valid Percent	Cumulative
under 1000 lei/month	25.0	25.0
1000-3000 lei/month	28.0	53.0
3000-5000 lei/month	26.0	79.0
5000-7000 lei/month	12.0	91.0
over 7000 lei/month	9.0	100.0
Total	100.0	