Knowledge Workers’ Expectations Towards a Digital Workplace

Completed Research

Tobias Kissmer
University of Duisburg-Essen
tobias.kissmer@uni-due.de

Stefan Stieglitz
University of Duisburg-Essen
stefan.stieglitz@uni-due.de

Julian Knoll
Technische Hochschule Nürnberg
julian.knoll@th-nuernberg.de

Rainer Gross
Technische Hochschule Nürnberg
rainer.gross@th-nuernberg.de

Abstract

The digitization around the workplace aims to increase a knowledge worker’s productivity and satisfaction level. In our study, we aim to validate the factors that drive an employee’s satisfaction within the current work environment and subsequently deduct the expectations towards the novel workplace. Analyzing the related literature, we’re able to derive the perceived key drivers for a new work environment and verify these within a large survey at a German headquartered global manufacturing company. With over 1,000 users questioned, we analyze our dataset with structural equation models and conclude, that the highest impact on the user’s satisfaction level is driven by the knowledge exchange amongst peers, followed by the perceived productivity and creativity. We could not find a significant impact of none of our demographic variables though. Our study concludes with recommendations for scholars and practitioners.

Keywords

Digital Workplace, Digital Office Worker, New Work, Productivity, Knowledge Exchange

Introduction

The Digital Transformation impacts companies in various ways, whereas the corresponding strategies are trying to defeat the multiple threats this transformation bears within (Matt et al. 2015). (Hoberg et al. 2015) define the Digital Transformation as follows: "The increasing digitization of our private, professional, and public life is commonly referred to as a disruptive process that is fundamentally changing the way companies compete, create value, and engage with their business partners and customers.” Large enterprises undergo this transformation in many areas such as product innovations, digitalization of work or customer integration. Therefore, the management of this Digital Transformation became an essential part of many businesses (Sebastian et al. 2017). In general, there are two main objectives: products on the one hand and people on the other hand. People are affected for example by the change of work culture. Office workers will find themselves in a more digitized workplace, rather than a classic office environment as they are used to nowadays. Kane (2013) state in their future oriented study, that digital transformation processes change businesses towards non-office enterprises, that accommodate their workforce within the virtual space. This is a very advanced way of looking at the currently omnipresent transformation process, but it picks up one of the key points around the digital workforce: The Digital Transformation is impacting the human being in a manifold way. Not only the offices will change, but also the collaboration tools, the place where people work and eventually the way people work.

Enterprises struggle with many challenges in this major cultural change towards a digital working environment, where just one of many is that “[…]automation is beginning to move in and eliminate office jobs too.” (Autor 2015). Simple tasks are said to be automated, requiring the workforce to be more educated and creative. Machines take over where simplicity and reoccurrence start. That is why it can be considered as a change that employees are both anxious about and long to have.
The more digital way of working doesn’t solemnly consist of a transformation around the information systems, but it also comes with a different expectation towards the working environment (Köffer 2015). This rather holistic view is often referred to as “New Work” and contains the redesign of all elements at the workplace, consisting of information technologies, human resources and facility management. The change towards new work requires a major change management since the types of people that need to be comfortable with their new environment are very diverse. Meske et al. 2016 for instance provide explorative insights, that demographic factors do have an impact on how technologies are used. Moreover, various factors such as corporate culture or technology adoption, influence the level of satisfaction or dissatisfaction of employees within their current – classic – work environment. However, until now there is not much current research that considers the view of the employees towards Digital Transformation of the workplace.

To close the existing gap of knowledge, we first need to identify and discuss the motivating factors for a company to digitally transform the workspace towards “new work”. Based on this, we then derive factors that users expect from a new workplace in theory. By undertaking a large survey with more than 1,000 employees at a large European manufacturing company, we analyze the user’s current work environment (referred to as “classic work” in the following) and map their satisfaction level. We statistically explore the probability of factors that influence this satisfaction level the most, which enables us to derive the most important influence factors that users hence expect from a new work environment, as we are then able to match the classic work satisfaction to the expectations for a novel workplace and therefore derive the impact this bears for information systems (IS). We address the following research questions in our study:

**RQ1:** Which factors influence a user’s perception of the workplace?

**RQ2:** How are demographics of employees and the expectations towards a novel workspace related to each other?

We conclude our study with recommendations for scholars towards further fields of research and for practitioners, enabling them to derive conclusions for the Digital Transformation journeys.

**Related Work**

**An Area of Conflict: The Digital Transformation and the Human Being**

Since the 1980s, disruption and “radical changes” (Besson and Rowe 2012) are welcoming an increasing focus in IS research. Per (Orlikowski 1996), OT can be understood as “substantially changing an organization’s structure and practices”. In their study, they further outline the constant need for change, as society and enterprises alter towards more agility and flexibility.(Besson and Rowe 2012) show that organizational transformation (OT) has been and still is a topic of great interest throughout many disciplines of research. They also found that the focus of most IS research is not on OT as it doesn’t appear in the top 100 research terms. They conclude that many questions still remain unanswered when it comes to OT in IS research.

Given this, new levels of competition make companies rethink their principles, the digitization accelerates progress in a novel way and hence requires companies to adopt, since others do too. Due to this, risk-taking does become a new cultural norm within organizations and enables employees to think creative, rather than sequential. Kane et al. (2015), however, state that most organizations tend to struggle with this change. As (Fitzgerald et al. 2013) found in their study, most employees that were questioned think that the development pace of their company regarding the use of new technologies, is too slow. They hence partially yearn for this type of change.

On the downside, the classic return of investment calculation is hard to follow up on, since the increased workforce productivity does not automatically reflect in an immediate revenue increase. It rather adds up to a long-term process, that bears fruits later on. This is why executives are often not fully confident in digital workplace transformation journeys (Fitzgerald et al. 2013). Furthermore, a transformation journey will as well require the leadership principles to change, not only the workforce. This “digital leadership” results in a more collaborative and supportive way of guiding employees, enabling them to be more productive (El Sawy et al. 2016). The guidance of employees towards a different way of working is essential. One reason for this is that automation takes place almost everywhere, which is why simple, reoccurring jobs
tend to vanish from the modern office surface in the future (Autor 2015). Workers that currently host rather
simple tasks, need to reorient themselves.

Thus, a Digital Transformation is often accompanied by major cultural changes within one organization, as
well as changes within the skillset of employees. Less technology experienced users will need to adapt new
ways of working. What feels right and good for one group of employees (e.g. younger generations), does not
necessarily feel right for another group of for example less technology prone users (Matt et al. 2015). But companies
need to change themselves towards the more digitized workspace. The time when this change
needs to happen is not foreseeable, but the split of the workforce – between more juvenile, agile workers
and rather classic workers – tends to shift towards the juvenile. This drives the demand towards a more
digital workplace.

Therefore, the strive of people to want to work for digital mature companies increases steadily and requires
companies to change (Kane et al. 2015).

**A New Way of Working**

Newer generations of employees (for example “Generation Z”) confront companies with totally different
requirements towards the workplace. They demand “transparency, self-reliance, flexibility and personal
freedom” (Singh and Dangmei 2016), whereas a face-to-face communication gains importance as well. An
office workplace that is easy to accommodate oneself within is preferred amongst newer, digital
generations. As Meske et al. (2016) found in their study, the demographic factors like age, sex and
responsibility do have a significant influence on a user’s activity within digital tools. It is hence of interest,
whether this only reflects in the actual use of the system, or if it does alter the user’s expectations towards
the workplace. Furthermore, the future workforce demands technology in the working environment and
requires it to be integrated into everyday enterprise-working life (Singh and Dangmei 2016). It is hence not
fully possible to provide all employees with the same modalities within the workplace. One of the
consequences is that things that are commonly perceived as simple, such as furniture, needs to change. As
this fact might sound ordinary, but it bears great potential for a modern workplace. The way furniture is
arranged in the office and for example the type of furniture that is used will primarily define the type of peer
exchange within the office space. This leads to either a lively exchange of information if done right, or will
cause information silos and less interaction with other departments if done in a classic way that does not
follow the principles of these new workplaces (Kane 2013).

But not only employees will have different demands towards the new working environment in the future.
The previously described changing competitive situation for companies urges them to change towards more
efficient and productive thinking. As companies are forced to do so, people will indirectly notice this and
apprehend it. Therefore, the future workforce needs to be able to support this way of working. The latter is
hence not only a drive coming from the generation change of employees, but it is rather to be seen as a
holistic ensemble playing of all factors – firstly the change of generation and the digitization (Eberhard et
al. 2017).

Technostress, just like normal stress has a negative influence on an employee’s creativity (Wang et al. 2017),
which is why the implementation of new digital technologies in the workplace does not work well if it is
applied without changing the working environment as well. Technology, that suits the surroundings on the
other hand, does accelerate this process of creativity and this is required for knowledge workers in the future
(Dery et al. 2017).

Furthermore, literature states that innovation is built upon the “integration of diverse knowledge” (Yao et
al. 2017). This leads to the conclusion, that knowledge exchange is crucial for innovation. As we found
earlier, productivity/efficiency and creativity are seen as the key drivers for the future workplace culture.
In order to validate this, we interviewed eleven managers and employees at the case company and could
find, that this is reflected as a priority for all questioned employees. Correspondingly, we derive that
knowledge exchange, productivity and creativity are pillars for the digital workplace. As Sarigianni et al.
(2017) stated, the interconnectedness between persons is crucial to the success of projects and tasks, due to
the necessary information flow. To support the transparent knowledge exchange towards all interested
parties, it is necessary to make this information available to everyone, no matter where they are, which is
one of the foundations for virtual teams (Carter et al. 2015). As an applied example, it is thus of major
importance to rethink the way documents and paper is handled within a novel workspace. The paperless
office comes with obvious advantages like environmental benefits, but it mainly fosters the exchange of information in virtual environments as well. Since new work concepts promote remote and mobile working per definition, paperless concepts do need to be part of the digital workplace (King and Toland 2014; Orantes-Jimenez et al. 2015).

**Classic and Novel: The Workplace Concept at the Case Company**

In the following, we will provide the necessary insights about the current and the future workplace situation in our case company. Based on the findings in literature, we will lay out the concepts that are prevailing now in the classic work environment. This aims to provide the understanding of the basis which was used to run the survey. This is later on followed by the research model, the survey itself and the corresponding results.

Being a well-established manufacturing enterprise headquartered in Germany, our case company looks back on almost a century of experience and has almost 100,000 employees. In 2018, more than 50,000 office workers attend to work in 50 countries all over the world. This requires on the one hand a global collaboration amongst all employees and on the other hand an open-minded workforce that supports this geographic dispersity. Due to this, the company was especially suitable for our study purpose. The current, classic workplace concept includes plan offices with fixed desks which results in one designated desk for one employee. Hence, the space is optimized and vastly used for desks and therefore comes with a very low share of meeting rooms or other spaces for informal knowledge exchange. Kitchens cannot be used for the latter since they pose as passages and cannot serve properly for casual talks. This results in a classic work culture that currently prevails. It requires employees to book meeting rooms early enough to have discussions. Spontaneous talks are not encouraged due to the missing space for this. Furthermore, the current state of the information systems that are used within the company do neither encourage employees to share information (knowledge exchange), nor do they foster the creativity or the paperless principles. To be more precise, most information exchange is taking place with files that are stored on network drives or via Email. The inflexibility of network drives automatically results in the restricted availability of information to peers. Furthermore, Email is a medium that requires users to specifically direct their information to a group of persons. Others who are not included in this information flow are hence excluded from this knowledge and this might have a negative effect.

Considering the previously analyzed trend towards a digitized working environment, a rather large discrepancy can be found. To overcome these flaws, the case company developed a very brief concept and now plans to implement this within a pilot project. It will contain a shared desk model, that reduces does not retain a designated desk per employee, but rather a specific number of desks that can be shared flexibly. By applying a ratio of 0.7, the number of desks decreases which frees up space for other, increasingly important areas like a larger kitchen, think tanks and huddle rooms for ad-hoc meetings. Eventually, this leads to the fostering of casual and informal exchange amongst peers. Additionally, the information systems will support the principles of the digital workplace and offer an easier information exchange with cloud services such as Microsoft Office 365. They foster both the knowledge exchange amongst peers as well as the individuals own productivity and creativity (Murray 2011).

**Data Basis and Research Methodology**

In this study, we aim to evaluate the expectations of office workers towards the new work environment. We conduct a survey that targets all office workers that are supposed to work in this previously described pilot for a digital working environment. 1,052 employees were asked about their current, classic work environment and their level of satisfaction with it. All of them will be part of the first pilot project, which was described earlier, and they currently work in the same environment at two different locations. The departments that the persons belong to include a logistics, an IT and an innovation department of the case company. Hence, the work mode of all involved staff is pure office work with a certain share of mobility, as well as the focus on knowledge work. The variable department is part of the demographics in order to see the mutual influence of this.

The intention of our evaluation is to (1) identify the perceived key drivers from an employee’s point of view for a new digital working environment, (2) evaluate the employees’ attitude towards those factors within the classic work setting, and (3) derive the expectations of office workers for the digital workplace. Based
on our literature analysis we identified three major areas where the “new work” environment potentially differs from the “traditional work environment”: (1) Knowledge exchange, (2) creativity, and (3) productivity/agility. As we want our results to be as precise as possible, we do not expect the users to imagine the new work environment and answer question on that basis, as this would cause a high bias. Instead, we derived from the three areas the following constructs, that we put in the setting of the classic work experience. All constructs were systematically derived from both interviews that were undertaken at the case company and the previously outlined related work that indicated the three pillars/constructs (e.g. Yao and Robert 2017). Firstly, this is the creativity expectation, which reflects the employee’s expectations towards creativity at work. Second, we collect input for the classic work experience overall, asking for feedback towards the above mentioned major factors like productivity, innovation and effectivity in the classic setting. The last construct that we ask is the knowledge exchange amongst peers and across departments. All questions were measured on a 5 point scale.

In order to address research questions 2, we include in our model that all these constructs are moderated by five demographics (age, sex, position, location, relation to the company, being either intern or extern) and are each individually set into relation with a latent variable that reflects the satisfaction in the current environment. The latter lets us derive the significance of the influence factors for a digital workplace. Although our model contains several constructs, we explicitly do not correlate them altogether as we were for each effect individually. Figure 1 shows the research model that is used for our study.

![Figure 1. Empirical model used for this study](image)

The final questionnaire contains 22 questions which cluster to the five factors from our research model. We conducted our data analysis using the programming language R for statistical computing. At first, we remove all participants from the dataset who refused to answer five or more questions of our survey. By doing so, the number of records decreases from a total of 399 to a final n=338.

Afterwards, we supplement the values of the remaining nonanswered questions in 5 multiple imputation steps using the R package mice (van Buuren and Oudshoorn 2007). This package implements a method dealing with missing data based on fully conditional specification, where each incomplete variable is imputed by a separate mode. Subsequently, we transform each categorical variable in the data set (e.g. sex) to indicator variables (one hot encoding) to be able to include these into our model. Finally, to prevent multicollinearity, we remove variables which contain the same value in more than 99 percent of the record.

In order to analyze the separate effects, we examine the relationship between each identified key driver and the satisfaction of the employees based on an own structured equation model (SEM) employing the R package lavaan (Rosseel 2012).
Results

Table 1 shows the regression analysis from the key driver knowledge exchange to the cluster employee satisfaction. The latent variable knowledge exchange is based on five survey questions, three of them formulated in a positive way (e.g. "I have the feeling I receive enough information from my coworkers to do my work") and two formulated negatively (e.g. "I think the knowledge exchange in my department needs improvement").

All coefficients forming the latent variable are significant and match their formulation (i.e. negative questions relate to negative coefficients). Since the coefficients forming the latent variable satisfaction are positive too, we obtain a strongly positive relationship (coefficient: 0.991) between knowledge exchange and employee satisfaction, which means, for example, if the established knowledge exchange is perceived as good the satisfaction of the employees increases.

|                   | Estimate | Std.Err | z-value | P(>|z|) |
|-------------------|----------|---------|---------|---------|
| Knowledge Exchange| 0.991    | 0.133   | 7.434   | 0.000***|
| Demographics      | 0.249    | 0.309   | 0.804   | 0.421   |

Table 1. SEM analyzing the influence of knowledge exchange

Figure 2 is visualizing this connection and indicates the corresponding results. It is to be noted that all significance marks were done in the common format (p value < .01 indicated with ***). As stated earlier, we did not run the full model as one SEM but examined the clusters and their effects individually in order to avoid interference between the expectation models.

The regression analysis modeling the relationship between the key driver productivity and innovation experience (PIE) and the cluster employee satisfaction is presented in Table 2. The cluster PIE includes four survey questions which all are formulated positively (e.g. "My current work environment enables me to work productive."). All coefficients forming the cluster PIE as well as the cluster satisfaction are positive and significant. Thus, we obtain a strongly positive relationship between PIE and employee satisfaction (coefficient: 0.817), which leads to the finding that if employees are provided with an environment which helps them to work more productive/efficient/innovative their satisfaction level raises.

|                   | Estimate | Std.Err | z-value | P(>|z|) |
|-------------------|----------|---------|---------|---------|
| Productivity and Innovation Experience | 0.817    | 0.076   | 10.748  | 0.000***|
| Demographics      | -0.125   | 0.247   | -0.508  | 0.611   |

Table 2. SEM analyzing the influence of classic work experience

The results for the SEM examining the relationship between the key driver creativity expectation and the cluster employee satisfaction is shown in Table 3. This latent variable depends on four survey questions,
three formulated positively (e.g. “Creativity is promoted actively at our department.”) and one with a negative formulation (“Creativity is not necessary for us.”). Like for the cluster knowledge exchange, all coefficients forming the cluster creativity expectation are significant and match their formulation (the negative formulation results in a negative coefficient). Since the coefficients of the latent variable satisfaction are positive and significant as well, the model reveals a positive relation between creativity expectation and employee satisfaction (coefficient: 0.637), which means the higher the creativity expectation the higher the satisfaction level. Even though we still consider this correlation as rather strong, creativity does not influence the satisfaction level as strong as the productivity experience or the knowledge exchange.

|                   | Estimate | Std.Err | z-value | P(>|z|) |
|-------------------|----------|---------|---------|---------|
| Creativity expectation | 0.637    | 0.077   | 8.268   | 0.000***|
| Demographics      | 0.067    | 0.274   | 0.243   | 0.808   |

Table 3. SEM analyzing the influence of creativity expectation

Finally, we observe that in all three models the influence of the latent variable demographics is not significant. The moderator demographics is based on five variables as stated earlier, where four are showing a significant influence on the latent variable, one (location) with no significant effect. Even when the location is excluded from the models, the cluster demographics still does not significantly influence the employee satisfaction for each of the defined SEM clusters.

Discussion and Limitations

Our results enable us to better understand expectations of digital office workers towards the workplace. We addressed the questions explicitly in the classic work environment to avoid a perceptional bias. Thus, we identified key expectations (clusters) towards new work, evaluated their status in the current environment and finally captured the overall satisfaction level. This enables us to understand the correlation between the clusters and the satisfaction (being either positive or negative), as well as the strength of the link.

First of all, we observed a very strong (.991*** and significant correlation between the perceived knowledge exchange and the users’ satisfaction. This indicates, that knowledge is, among all considered factors, the most important cluster. This means, that with the focus on exchange of knowledge at the digital workplace, the employees’ satisfaction level will increase. As stated earlier, the case company has the idea of designing the new offices in a more open way so that kitchens for example can be used as point of information exchange, rather than just a passage. As this will increase the exchange of knowledge, our analysis indicates that the satisfaction level is going to be increased as well – which is a core target of the digitized workplace.

To be more specific about the knowledge exchange, we asked about the users’ perception of the (1) formal and (2) informal knowledge exchange, as well as (3) the sufficiency of knowledge to do one’s job. As we found, (2) was the most influencing factor, followed by (3). This means, that users in a future digital workplace environment are more satisfied, if the informal knowledge exchange is supported and if they feel to have enough information to do their job. We furthermore asked negative correlated questions, which are (4) if the users perceive the knowledge exchange within the department to be in the need of improvement and (5) if this applies as well for other information exchange with other departments. Both factors (4) and (5) were stronger correlated with the latent variable than the questions (1)–(3). We can hence derive, that the information exchange within a department needs the most focus, followed by the inter-department exchange. Information systems play a key role here to optimize these factors. E.g. cloud technologies provide the possibilities to make information more transparent than before, supporting the requirements of the employees towards new work.

Evaluating the perceived productivity and innovation experience within the classic work environment, we asked about the current way of working how (1) productive, (2) efficient, (3) across departments and (4) innovative it is for the employees. We found that (3) was the factor with the least influence, whereas (2) and (4) had the most influence. It is to say, that the influence differed not significantly (coefficients between
Hence, we can derive that the perceived efficiency and the possibilities to work innovative, are important for the digital workplace environment. The influence of this latent variable PIE to the users’ satisfaction level is with .817*** strong as well. We figure that those information systems are wanted by the users, that directly support these goals, especially the efficiency. Being able to work innovatively has to be supported by the IS but is furthermore influenced by the office design.

The last cluster we derived from the related work as important and that was evaluated, is the expectation of the employees towards the creativity (CE). We asked, whether (1) the existing spatial possibilities foster creativity, (2) the organization/managers support creativity, (3) the internal processes support creativity and (4) creativity is not necessary at all. Interestingly, (1) and (2) were similarly strong towards influencing the latent variable CE. This means, that these are the most important influencing factors – having the spatial and organizational possibilities towards creativity. (3) was less strong and (4) was slightly negative but not strong at all. This indicates, that employees do not see processes as inhibitors for creativity and furthermore have a diverse view upon the need of creativity at the workplace. Overall, we found that the creativity expectation is less strong in influencing the satisfaction level (see table 3). Given the previously described working environment and the corresponding requirements, we derive that the questioned departments need per se creativity in their everyday work but employees of the three questioned business areas do not see this as the satisfaction driving factor. As the demographics – and hence the departments – did not show a significant influence, we derive that across all departments people have a higher longing for the basic needs like peer exchange and productivity, rather than creativity. The latter is important nevertheless but not as influencing as the other constructs.

A moderator that we evaluated with the questionnaire but did not mention so far with the clusters, are the demographics. As stated in the results and in line with other studies (cmp. Lam and Lee (2006)), demographics were never significant with none of the statements and furthermore did not show a strong influence. This means, that the expectations of employees towards the new working environment are not influenced significantly by the demographic profile of each employee. Hence, we derive that our evaluated factors can be used for all types of employees. It is to be noted though, that this does not express the perceived current situation by the user. Further checks we ran did not show significant correlations between, for example, the age and the information exchange that is possible with the current classic work environment. We conclude, that the requirements and expectations that employees have and that we found in our study, are uniform for every kind of position, gender, age, location and relationship with the company.

Limitations of our study that have to mentioned are: the offices at the two German locations where we asked the employees, do not exactly look the same. They follow the same concept though and we could see that the location, which is included in the demographics, does not significantly influence our latent variables. Another limitation is that we only considered two German locations, whereas all subsidiaries globally look different, although they follow the same concept for office layouts and are equipped with the same information systems. Thus, there might be differences if this questionnaire was to be repeated globally, which we did not evaluate in this study. Furthermore, as we base our findings on just one enterprise, it represents a certain organizational background in conjunction with the given location, which was in Germany in this case. However, we think that the company can be considered as a typical globally acting enterprise. As we could not include further countries or companies, our results need to be verified against other entities. At last, the field of novel working is multifaceted. We derived the input factors from the related work and picked the most relevant to the best of our knowledge. Nevertheless, we do not claim a full representation of the subject.

**Conclusion and Further Research**

The Digital Transformation is an omnipresent buzzword - not only in science but also in enterprises nowadays. As we could show based on our case company, the transformation does not only include changes towards IS, it affects a broad variety of fields around the workplace and triggers many further effects.

Research question 1 (RQ1) was answered, as we derived potential leveraging factors from the literature and tested them in a large survey. We further questioned the target of RQ2, as we included the demographics in each statement and found that there is no remarkable influence. We pointed out, that the factors creativity, efficiency/productivity as well as knowledge exchange are important for an employee's satisfaction level
within the classic work environment. Based on this, we derive the conclusions for the new work environment and hence for the digital workplace. Our survey with over 330 responses in a large European manufacturing company showed, that the derived factors from the related work do have a significant influence on the employee’s satisfaction. We matched the satisfaction level to the users’ outcome expectation for the new work environment and could therefore determine the relevancy of the previously mentioned clusters. Creativity, which we found to be the least influencing factor, has to give way to the strong influence of productivity/innovation/efficiency and the perceived knowledge exchange amongst peers. The latter was found to have the most severe influence onto the satisfaction and is hence presumed to be the most important expectation of employees in a new work environment. In regard to the information systems, we figured out that as the information exchange and then also the productivity is perceived to be the most important expectancy towards the digital workplace, cloud technologies around the workplace foster these goals tremendously. The more transparent access to knowledge is only possible with centralized and easy-to-access services. As employees expect a better exchange amongst peers, the device independency should be ensured, as people will tend to walk around and get into a more causal exchange with peers.

We further found that the many times stated influence of demographics does not leverage the expectation factors. Hence, the users’ expectation is not influenced by any of the demographics we evaluated. Further separate tests regarding the correlation between the age and the perceived productivity within the classic work environment for example did not show patterns or significance as well. We did not pursue this further, as it doesn’t match our research questions for this study.

Further research needs to extend our findings by including further factors and test them towards their influence. We encourage scholars to conduct a validation of our study within other companies and with a global focus. We further suggest to eventually re-validate these factors within the target environment – the new, digitized workplace.

References


