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# Where are we going to work?

Corporate real estate strategies after  
digitalization.

Case study

Master's Thesis for the Spatial Planning program  
Specialization Planning, Land and Real Estate  
Development.

Nijmegen School of Management  
Radboud University

September 2022

Case study on  
the Impacts of digitalization in the Corporate Real Estate Strategy of  
Philips Domestic Appliances

Master's thesis submitted for the degree of spatial planning with specialization land and real estate development.

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## Summary

This research explores the topic of digitalization of work and its consequences on corporate real estate strategies. While digitalization has been around for some time, the massive move to remote working that happened during COVID-19 made visible the problems and advantages of this way of working and put in perspective the role of these places in our lives (Devine-Wright, et al., 2020).

Corporate real estate strategies' (CRES) goal is to support the overall strategy of the business to enable creation of value (Then, 2000), and with work under transformation, the reconstruction of workplaces and work values must be understood by the corporate real estate strategies and real estate professionals. The aims of the research are to understand the impacts that digitalization has on corporate real estate strategies, update the interests of stakeholders surrounding the workplace and review the influence of corporate real estate strategies in shaping new ways of working towards a better future. To fulfill the aims the following research question was formulated:

In what ways digitalization trends impact the CRES and the future of workplaces at Philips Domestic Appliances?

The theory that frames the approach to the question is that organizations produce a vision of a workplace to support value creation, this is strategized to produce certain type of office characteristics that should create the working conditions to create value. However, digitalization trends impacted the employee's values and their working experiences, therefore, by contrasting the vision and the strategy against the employees working experience the results are produced.

This qualitative study took place in Philips Domestic Appliances and takes a case study shape informed by the main stakeholders in the production of workspaces: the real estate department, commercial real estate firms, and employees.

To produce the results 3 assumptions were formulated to test them against the data obtained from documented policies of Philips Domestic Appliances, documents from the commercial real estate partners, and interviews with the real estate team and employees.

The findings contributed to concluding that the standardization of working used to forecast spatial needs is no longer updated to the levels of digitalization of tasks and autonomy the employees have nowadays. Working from home has consolidated as the ideal workplace to achieve the best levels of concentration and comfort making the office only relevant to perform collaborative tasks, creating social bonds and getting closer to the brand.

Whereas a digitalization journey is part of the vision, it is nowhere grounded on the real estate strategy. There is a strong resistance to steer cultural transformations that could cause discomfort and losing talent, the employee should feel empowered to make their work choices and the culture will welcome all, but the research shows that real work autonomy is lived at home and the office still requires employees to be flexible to adapt to certain etiquette and norms.

The physical office, its characteristics and location still have a strong symbolic meaning for employees and leaders, which is why they should be engaged if a work spatial transformation will be steered.

Ultimately, there are opportunities for corporate real estate to develop innovations, based on digital working, that add value to the employee attraction and retention which is a hot topic in corporate discussions.

Keywords: digitalization of work, corporate real estate, workplaces

## Preface

Coming from a commercial real estate background my interest always floated around the role of such buildings in the shaping of the city, its impacts on society, their rationales for development, and the regulations which I thought missed a comprehensive understanding on the impacts of commercial developments and the potential of them as part of broader positive transformations.

Such motivation eventually collided with digitalization topics. The digital race and its rapid adoption have altered our social dynamics, space time perceptions, and our relationship with the physical space.

At the start of my internship, I joined several discussions on the future of Philips Domestic Appliances offices around the world and realized that at the bottom of the discussions was the employee culture, their perceptions of the meaning of work and its connection to the office space. This realization was accompanied by the hot topic discussion of bringing back employees to the office after the long pandemic lockdowns during which the digitalization of work was adopted by many.

My main motivation was to challenge the corporate real estate to become aware of its potential contribution to bettering peoples' lives and to take the need for transformation as a starting path for circular adoptions in real estate.

At this point I would like to thank my thesis supervisor who guided this ambitious motivation to the practical and still critical topic of this research, and the real estate team at Philips Domestic Appliances who were open to be challenged and always supportive to provide contacts, information, and honest experiences through which I came to realize that western contemporary culture and digitalization of work are playing an important role on the value of work, which inevitably leads to a new understanding of the workplace.

During the making of this thesis, in the Netherlands, work regulations urged employers to cover expenses for employees working from home and gave employees the right to request working from home. This institutional support to the new ways of working is critical as it puts pressure on the corporate real estate industry to acquire a holistic view of its role in society.

I extend my gratitude to everyone involved in supporting this journey as it was not an easy one. With great motivations towards the future: I still believe in utopias!

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## Acronyms

CRES - Corporate Real Estate Strategy

HR – Human resources

IWMS - Integrated Workplace Management Systems

OC - Organizational Culture

PDA - Philips Domestic Appliances

RE - Real Estate

REP - Real Estate Partners

# 1. Introduction

Since the introduction of smartphone-driven and remote-working practices the workplace concept has been in transformation. The adoption of workplace freedom, flexible hours, suburban lifestyles, and less stressing routines represent innovations that theoretically should result in progress (Celbi,s, Wong, Kourtit, & Nijkamp, 2021), however, while the adoption of this new work dynamics was gradually scaling, the COVID-19 crisis pushed most of the office workers to quickly adapt to it (Devine-Wright, et al., 2020) raising the awareness of the role of places in our lives and opening the discussion on the reconstruction of places after the pandemic and our relationship with them (Devine-Wright, et al., 2020).

Philips Domestic Appliances (PDA) global headquarters in Amsterdam is no stranger to this discussion which is why this research uses this organization as a real-life container to analyze the impacts of digitalization and post pandemic work dynamics in the Corporate Real Estate Strategy (CRES) which ultimately bounces towards the importance on the alignment between culture, Organizational Culture (OC) and corporate real estate strategy (Arkesteijn & Nase, 2018).

A critical review of the CRES paradigms is relevant as to contribute to the OECD (2020) call to rethink a new normality in a better and healthier way, one that preserves the productivity while enhancing the social inclusion and quality of the environment.

There is certainly a momentum to challenge and inspire behavioral shifts to make cities more resilient, circular, and smarter in which the corporate real estate has a role to play.

Furthermore, the workplace location has an influence over some long-term choices such as transport preferences, and where to work in relation to where to live (Guan & Wang, 2020) which is why is relevant to have a holistic understanding of the transformation of work and its placement.

This research takes a qualitative approach to the documentation and experiences of the three main stakeholders identified in the formulation of a CRES which are the organization Real Estate (RE) team, the Real Estate Partners (REP) as commercial real estate firms, and the employees who are the end users and whose productivity and satisfaction are key to the value creation behind the organization (O'Mara, 1999).

By confronting the current strategy with the understanding of digital trends and the current experience of working this research aims to update the interests of a CRES, the impacts of digitalization and the future path for workplaces.

The following sections elaborate on the research problem, aims, questions and relevancies for the science and social perspectives, followed by the theoretical framework that defines the main concepts of study which are the corporate real estate strategies, workplace concepts and digitalization of work. The methodology section explains the choices made for approaching this research and it is followed by the reporting of results and conclusions on the proposed research questions. In the discussion section the results and conclusions are extrapolated to the broader discussion of the future of workplaces.

## 2. Research problem

The COVID-19 crisis pushed companies to target cost-saving opportunities and the employees to work from home leading to high inefficiencies in the leased office square meters. Office buildings that suddenly became empty made visible the possibility of different ways of working and challenged the real need for having a workplace (CBRE, 2021). Such discussion is accompanied by the boost in digital trends, a reflection on the importance of having cities that provide better life quality, and a call to use the lessons learned to improve people's lives thru innovation, restructuration, and a build of a better "new normal" of improved resiliency (OECD, 2020). These conditions call for a critical, integral, and updated review of current CRES, market trends, business models and the purpose of workplaces.

CRES rationales are traditionally formulated to support the goals and the overall strategy of the business (Then, 2000) which is why their alignment is key to success. However, currently the path for the future is in transformation on a broader scale than just the cost rationales, the traditional office working model has been challenged questioning the entire purpose of an office and the real spatial qualities that attract talent, enhance productivity, employee satisfaction and health (O'Rourke, 2021).

What constitutes the research problem is the consequences of the social shock and massive digital move of COVID-19 in the office spaces, the reconstruction of workplaces, and the ultimate impacts of both on the CRES and work values of companies that have office spaces as a support source of value creation such as PDA.

### 2.1. Research aims and research questions

A critical review of the current paradigms of CRES aims to contribute to the following:

- Understand the impacts that digital working has on the CRES.
- Report the current interests of stakeholders regarding the future of workplaces.
- Review the influence of CRES in the construction of the "new normal" and new ways of working.
- Reflect on the path towards a better future for workplaces.

To fulfill the aim the following question and sub questions are placed:

#### **In what ways digitalization trends impact the CRES and the future of workplaces at Philips Domestic Appliances?**

- What is the vision of the workplace according to the current CRES?
- How are digitalization and derived trends currently considered by CRES?
- How is CRES driving the transformation of workplaces?

### 2.2. Scientific relevance

This research contributes to fill gaps found in different topics surrounding corporate real estate, real estate markets, and workplaces.

- *Real estate markets:* There is a gap on the understanding of the interests and incentives between the RE market players towards an increased cohesion that improves the wicked problem of the office building stock and development (Janda, Bright, Patrick, Wilkinson, & Dixon, 2016). This research contributes to these gaps by updating the current interests surrounding a CRES and

furthermore questioning the current business model under the new complexity derived from technical, institutional, financial, sociocultural, and symbolic features of work (Theurillat, Rérat, & Crevoisier, 2015) by identifying the impacts of new trends on PDA CRES.

- *Corporate real estate*: There is a need to develop an understanding of the impact that different cultural dimensions in multinational organizations have on the management of the CRES (Arkesteijn & Nase, 2018). As well as emphasizing the need to involve diverse stakeholders and organizational change to succeed in the implementation of technology systems related to the RE (Maslesa & Jensen, 2019). This research addresses these gaps by incorporating the culture and experiences of employees to contribute to the construction of their role in the transformation.
- *Workplaces*: Is needed to understand the potential of place reconstruction after the pandemic (Devine-Wright, et al., 2020) and reevaluate the assumption that the workplace is an office (Marsh, Perez Vallejos, & Spence, 2022). It is needed to narrow down what to consider when providing workplaces, in which hierarchy (Roskams & Haynes, 2019), and a multidimensional approach to identify the impacts on remote working specially in relation to the well-being (Charalampous, Gran, Tramontano, & Michailidis, 2019). This gap is addressed by approaching the significance, experience, and importance of the workplace for the selected stakeholders.

Furthermore, the workplace needs to be approached in a broader organizational context (Karanika-Murray & Michaelides, 2015) this research addresses this gap by expanding the analysis to 3 different layers of the CRES.

### 2.3. Societal relevance

Current companies are facing the challenge of adjusting their working policies in reaction to the first perceived consequences of the massive move to home office during COVID-19 (CBRE Research, 2021). There is still a lack of understanding on how the significance of the workplaces changed and a need to collaborate on the reconstruction of workspaces in a better way (O'Rourke, 2021). Companies as drivers of CRES need to understand their role in workplace reconstruction which is why this research comes relevant to them.

On the other side, employees endured the COVID-19 swift changes at different levels of resilience and flexibility, with still not clear lessons learnt. To some extent the value scale was challenged. In a world spatially limited and digitally wide the realization of the value of social interaction, health, open spaces, fulfillment, and perhaps even life meaning has not yet been linked to the meaning of work, commercial organizations, and broader cultural implications (O'Mara, 1999). This research contributions to better the understanding of the employee's needs, interests, and participation in the RE strategies is necessary to address the possibility of a new work social contract in which the employee life gets improved.

This research also can be of interest to planners who will have to deal with any impact related to changes in the density of office space occupation and must understand the planning implications of any radical change or gradual change in workplace values.

The RE market can also benefit from the outcomes of the research by gaining a better understanding of the organizational changes that can produce a shift in the qualities and amount of the future demands for working space. Both planners and RE owners face negative consequences when high surplus or vacancies of a unique space cannot be solved, this research aims to disclose the potential of rebuilding workplaces as a part of the strategy for a better city.

Finally, the reduction in place dependent working has the potential to create transformative changes in cities (Akbari & Hopkins, 2018), making this research relevant to discussions on the future of business centers and the possibilities to steer the market transformation in a positive way.

### 3. Theoretical framework

The flexible work tendencies catalyzed by the COVID-19 pandemic shocked organizations, employees and landlords triggering a momentum to discuss the workplaces of today and their future. As O'Rourke (2021) points, how, where, and when we work need to be in the drive of the discussion. Such discussion is linked to the identified physical, digital and hybrid ways of working.

According to theory, within an organization the workplace choices are driven at a high level by the broad corporate strategy and culture (Arkesteijn & Nase, 2018) (Williams & Schubert, 2018). However, when it comes to the physical location, big transnational developers whose core business is providing such spaces add an extra layer of interests to the spatial possibilities.

Theurilliat et. al. (2015) pointed to the influence of the broad economic dynamics and rationalities that shape the quantity, quality and location of the buildings dedicated to host business and corporations of which supply, and maintenance depends on the actual demand and creation of office jobs. This bounces back to the organization discussions on how to work in the most efficient way. Roskams & Haynes (2019) pointed out the dependency of this on the individual characteristics of the employee and the kind of tasks he or she performs which are, to some extent, influenced by the organizational culture that engages all employees within an organization to a distinctive social atmosphere, management, leadership style, strategic emphasis, and success definitions (Arkesteijn & Nase, 2018).

From the state of the discussion surrounding the topic it is assumed that corporate real estate has different layers in its rationale. At a broader level big developers operate the availability of the spaces with a profit and marketing motivation, whereas in a below level companies acquire or lease these spaces with the aim to provide an efficient environment to support the organization strategies. Yet so, the success of the created environment depends on the organizational culture and the employees as individuals which is why they constitute the third layer in corporate real estate. All these layers were shocked by the catalyzation of the digital workspace trend provoked by COVID-19.

Furthermore the COVID-19 massive move to remote working showed to have associated effects on the reduction of commuting and therefore emissions, the increase of active forms of transport, a shift on housing location preferences, and an increase on vacancies in business centers (Moglia, J., & Bardoel, 2021) proving that how and where work are relevant topics in the discussion towards the future of cities.

The following subchapters will elaborate on the main topics that frame the research to deeper the understanding of the theories and introduce the concepts that lead the coming conceptual model.

### 3.1. Corporate real estate strategies (CRES)

The built environment for consumption and production is part of the capitalist model that currently influences the western world, meaning that all businesses need property to function (McDonagh & Nichols, 2009) whether they own it or lease it. In this context corporate buildings are meant to create the conditions that contribute to the creation of value and eventually surplus for the company, which is why, they mainly take decisions following the logic of the cost-benefit analysis, budgeting, social benefit analysis and human capital investment where the employees' interests, wages, living standards, cultural, moral and environmental considerations play an important role in their attraction and maintenance (Harvey, 1978). While the link between real estate and business needs seems obvious (Ntene, Azasu, & Owusu-Ansah, 2019) a deeper and detailed understanding of the real estate decisions and their impact in corporate values is not always present in organizations and in some cases is even non-existent (McDonagh & Nichols, 2009).

It is important to mention that at the corporate stage of RE, decisions are not driven by personal needs and end users are not expected to be involved in the processes of design, construction, location selection, raise of capital or liaising with authorities. Instead, costs, markets prices, and profit production are on the lead of the processes (Theurillat, Rérat, & Crevoisier, 2015). In many cases the supply of RE falls in to leasing schemes where corporations are restrained to the market offer created by developers. In this case, big developers play with locations, sectors, and properties to create a supply of spaces framed by regulations of planning, economic development, sustainable development, legal contracts and other local restrains. Multi-tenant developments are usually properties owned by shareholders and rented to reproduce invested capital making the concept of “urban rent” relevant given the possibility of a location increasing its market value in the future by taking advantage of major cities premium location values. This type of RE operates on an international scale where the evolution of the market becomes dependent on other sectors and even other geographies (Theurillat, Rérat, & Crevoisier, 2015) and it is a dimension that weights in transnational corporations that usually look for competitive advantage offered by certain geographies.

It is argued that the office location influences corporate image and therefore high-level management positions are expected to have a say in the choosing process. Locations are an extremely important variable to look at as they are limited and hold certain characteristics that define them beyond the scope of each building project, for example central business districts, innovation hubs or other specialized territories. Consequently, certain office buildings are developed highly around marketing to aim to potential users/occupiers, potential visitors as clients, business partners or suppliers, a local neighborhood community, central and local government, a financial community, and the public. The extent to which these targets are prioritized can differ, usually, the top drivers are marketing, clients, knowledge partners, income, and profit (Škevin, 2011).

At most, the lease of space comes in net usable area and often a percentage of the common areas is added, it is also a common practice to pay operative costs such as

maintenance, energy consumption, and parking spaces as an addition to the net rent (Škevin, 2011).

The RE assets retained by corporate organizations are in a constant attempt to align their physical qualities with the broad strategic goals to support and enable the implementation of the corporate plans (Then, 2000). Ultimately, corporate RE should firmly support a strategic vision and according to Yontz (2002) this is the highest-level expression of a CRES objective.

Part of a firm's strategic vision is to develop a competitive strategy to enable the production of services and products. Porter (2004) distinguishes three main strategies: cost efficiency, differentiation, and focus. These strategies have implications for spatial choices. Cost efficient strategies will look to concentrate production at locations suitable for the creation of economies of scale, and differentiation strategies will look for unique qualities, and brand positioning to serve wide scopes and distinctive market segments. Meanwhile, focus strategies will aim to become specialized in a particular market segment often by specifying its geography (Singer, Bossink, & H.J.M, 2007).

The ultimate result of these strategies is influenced by the different cultural variations that impact multinational corporations, which is why understanding that the value is created by the people puts the employees at the center of any competitive advantage creation (Arkesteijn & Nase, 2018).

The cultural dimension was first defined by Pettigrew (1979) when he introduced the term "organizational culture" to refer to the anthropologic foundations that comprise the meaning of symbols, visions, beliefs, myths, and ideologies that define the character of an organization. This was further researched by Cameron & Quinn (2006) who developed the Organizational Culture Assessment Instrument (OCAI) to evaluate the indicators that build the different dimensions of an organization which resulted in four organizational culture types:

1. Clan: is characterized by an explicit corporate commitment to employees. They are the central piece, and their development and empowerment are important for the organization. Participation and teamwork are encouraged to the point of generating an extended family feeling which discourages individualistic behaviors and values loyalty and consensus.
2. Adhocracy: these are dynamic, fast changing, entrepreneurial and risk-taking cultures. Creativity and innovation are highly valued which is supported by power not being centralized but flowing from individuals to teams.
3. Market: they are results-oriented cultures, they emphasize winning and measures constantly success based on numeric indicators. Competitiveness, productivity, and profitability are highly valuable along with tough and demanding leadership styles.
4. Hierarchy: these cultures have formal rules and policies that build rigid structures. Control and power are centralized and supported by procedures and policies that govern employee behavior. They are efficiency driven and aim for long-term stability.

Some of these characteristics relate to Nourse & Roulac (1993) drivers of property decisions which are:

1. Capture and increase the value of the organization's RE.

2. Promote marketing, sales, and brand.
3. Encourage, support, and promote a message to the employees and partners.
4. Support the sustainability of the business by production control, operation, and service delivery.
5. Enhance employee wellbeing and satisfaction by facilitating managerial processes and work.
6. Promote human resources objectives such as increasing employee efficiency and productivity.
7. Enable flexibility.
8. Minimize occupancy and real estate related costs.

Consequently, these drivers are linked to a business performance indicator that helps understand the expected outcome of the decisions. The first five drivers are expected to produce revenue growth and the final three contribute to profitability growth (Arkesteijn & Nase, 2018) these drivers and their outcomes can be further linked to the sources of competitive advantage pointed out by Porter (2004).

O'Mara (1999) built similar links by establishing three types of CRES in relation to their contributions in achieving certain business performance, this are:

1. Incremental: this CRES supports organizations with an uncertain future. It looks to delay major commitments and only meet the primary needs of space to operate, therefore, there is no emphasis on the employee preferences, amenities, or aesthetics. An incremental RE portfolio ends up being a random collection of buildings with no message that relates to the organization's values or brand.
2. Value-based: this strategy seeks the right functionality of spaces and uses the physical setting to symbolize the brand values and influence employees and customer behaviors. The RE building portfolio express a corporate image and is carefully selected.
3. Standardization: this CRES mainly focus in control and coordinating facility and real estate operations across the entire organization by setting standards, and metrics to forecast, and optimize the portfolio.

In an effort to fill gaps Arkesteijn & Nase (2018) linked OCAI organizational cultures with Nourse & Roulac (1993) CRES drivers to identify the main priorities for RE strategies across different organizational cultures and industries providing further evidence of the link between CRES and the organizational culture. In a similar way Singer, Bossink & Vande Putte (2007) linked CRES with competitive strategies providing evidence that such link also exists in practice.

Clan							
1	Employee efficiency and productivity						
2	Employee well being and satisfaction						
3	Employee innovation and creativity						
4	Enable flexibility						
5	Support environmental sustainability						
6	Promote marketing, sales and brand						
7	Reduce RE costs						
8	Increase the value of RE assets						

Adhocracy							
1	Employee innovation and creativity						
2	Enable flexibility						
3	Employee well being and satisfaction						
4	Employee efficiency and productivity						
5	Promote marketing, sales and brand						
6	Reduce RE costs						
7	Support environmental sustainability						
8	Increase the value of RE assets						

Hierarchy							
1	Reduce RE costs						
2	Employee efficiency and productivity						
3	Enable flexibility						
4	Support environmental sustainability						
5	Employee well being and satisfaction						
6	Promote marketing, sales and brand						
7	Increase the value of RE assets						
8	Employee innovation and creativity						

Market							
1	Reduce RE costs						
2	Employee efficiency and productivity						
3	Promote marketing, sales and brand						
4	Enable flexibility						
5	Employee well being and satisfaction						
6	Employee innovation and creativity						
7	Support environmental sustainability						
8	Increase the value of RE assets						

Non dominant							
1	Enable flexibility						
2	Reduce RE costs						
3	Employee well being and satisfaction						
4	Employee efficiency and productivity						
5	Employee innovation and creativity						
6	Support environmental sustainability						
7	Increase the value of RE assets						
8	Promote marketing, sales and brand						

	<b>Business performance indicator</b>						
	Profit growth, cost reduction						
	Revenue growth, increase sales						
	<b>Competitive strategy</b>						
	Lowest cost						
	Differentiation strategy,						
	<b>RE strategy</b>						
	Standardization						
	Value-based and standardization						

Table 1 Adapted from Arksteijn & Nase, (2018) & Singer, Bossink, & H.J.M, (2007).

Table 1 is meant to summarize the concepts and links found in the theory from which is possible to conclude that there is a relationship between CRES, organizational culture, and competitive strategy; and there are some expectations of the outcome of the CRES rooted in the organization’s business goals, however the goals might vary among different departments of the same organization (Singer, Bossink, & H.J.M, 2007).

For a CRES to be impactful it should focus on space management and delivery of CRE functions, have a flexible lease to match changing requirements, adopt a broader approach to the RE portfolio, enhance technological change programs and financial performance (Ntene, Azasu, & Owusu-Ansah, 2019). Typical stakeholders impacted by the CRES are investors, employees, tenants, property managers, supply chain vendors, and surrounding communities. Employees, as essential elements to the organization performance, are more likely to influence the CRES than tenants, customers, or surrounding communities. The engagement capabilities of the RE teams are essential to manage the relationships between the different stakeholders and oversee the implementation of best practices. The interests of each stakeholder and their levels of engagement, influence and power are up to each organization. Employees will tend to engage with the occupant experience topics, investors on data and insights on performance, and facility managers in more specific needs (Shimono, 2017).

Measuring the value of RE decisions is more difficult than a financial return number, a firm should develop a performance measurement that matches its objectives and the available data and resources, Lindholm (2006) developed a framework that focuses on

evaluating measures that contribute to certain RE strategic goals (*Table 2*) from which we can link data processing to a CRES aim.

Real Estate Estrategies	Possible measures
Reduce costs	Occupancy cost per square foot/metre
	Occupancy cost per seat
	Occupancy cost per employee
	Occupancy cost per dollar/unit of revenue
	Occupancy cost as a percent of total operating expense
	Occupancy cost as a percent of operating revenue by business unit
	Occupancy cost as a percent of operating revenue by building
	Occupancy cost per unit of production
	Occupancy cost as a percent of total labor and overhead by business unit
	Occupancy cost by building
	Space (square feet or metres) per employee
	Whether workplace standards are used
	Percent of space occupied
	Percent operational space versus non-operational space
	Total owned and leased space (square feet/metres)
	Persons per seat
	Number of moves per year
Cost of under utilized space	
Real estate cost per CRE employee	
Total CREM operating expenditures versus budget	
Increase flexibility	Percent leased space relative to total space
	Length of lease terms
	Use of virtual and flexible workspaces
Increase productivity	Employees' opinions on how well the workplace supports their productivity
	Distance employees commute
	Distance among company sites and businesses
	Time wasted with interruptions (due to open space layout)
	Percent shared services
	No loss of business due to real estate service failure
	Real estate spending as percent of gross margin
	Real estate spending as percent of total operating expenses
	Time used on real estate projects versus time budgeted for projects
	Money spent on real estate projects versus money budgeted for projects
	Amount of real estate advice given to other business units
	Number of service providers/service level agreements
	Number of transactions/projects/leases per FTE employee
	CRE employee qualifications
	Employee turnover
Number of steps/time for real estate approval process	
Use of audits for service providers	
Increase employee/internal client satisfaction	Distance to required transportation modes for employees
	Employee satisfaction with work environment
	Quality of indoor environment (lightning, temperature, noise)
	Workspace (size, shape)
	Amount of nearby amenities for employees
	Range of services offered by CREM
	Employee/internal customer satisfaction with responsiveness of CREM staff
	Employee satisfaction with CREM staff professional skills
	Employee satisfaction with CREM information sharing
	CREM response time to requests
Competence of CREM staff	
Investment in training per CREM employee	
Increase innovations	Number of teamwork settings
	Number of workstations per employee
Promote marketing and sale	Distance to customers
	Use of company logos and colors in workplace design
	Image rating based on building attributes
	Energy consumption (conservation)
	Number of energy audits
Increase value of assets	Environmental sustainability of buildings
	Real estate cost of acquisitions versus returns/IRR
	Lease vs construction or ownership cost comparisons
	Aging reports for leases
	Real estate holding costs per year
	Number of building quality audits
	Real estate return on investment
	Real estate return on equity
	Business return on real estate assets
	Sales or revenue per square foot (metre)
	Space (square feet or metres) per unit (dollar) of revenue
	Market capital value versus book value by building
	Percentage of surplus assets sold
	Time to dispose of properties versus plan
	Cost of disposal of property versus savings
Time to clear buildings versus plan	
Number of development projects for obsolete properties	
Status of risk management activity (contaminated sites)	
Effectiveness in corporate strategic progres	Percent CREM employees indicating strong understanding of how their jobs fit into attaining corporate objectives
	CREM involved corporate strategic planning
	CREM integrated with other functional strategies (HR, IT, etc.)
	CREM actively involved in firm-wide initiatives such as special asset use, consolidations, or shared services opportunities
	Number of formal and informal CREM meetings with top executives
	Fulfillment of CREM strategic aims
	CREM communication time with top executives
	Self evaluation of how well CREM decisions support strategy

*Table 2 Measures of value added retrieved from “A framework for identifying and measuring value added by corporate real estate” by Lindholm, A. & Leväien, K., 2006, Journal of Corporate Real Estate, Vol.8, No.1, 44-45*

This review is useful to establish the following assumptions in relation to the CRES:

- The market level of RE restrains the offer of spaces focusing on locations and framing their choices on planning, economic development, legal restraints, shareholders' interests and profit.
- Corporate organizations retain spaces to enable the strategic plan of the organization.
- The RE state choice to retain a space is framed in a CRES which can be classified and linked to a competitive strategy in terms of performance.
- The ultimate result of the CRES is influenced by the cultural dimension surrounding the employee.
- The cultural dimension (when it comes to organizational culture) can be linked to some RE choices and consequently to a competitive strategy.
- RE choices have broader consequences in the employee performance and company image.
- Culture and CRES must align to promote cultural changes.
- Corporate real estate has typical stakeholders with appointed processes.

### 3.2. Workplace concepts

The working environment has long been defined in terms of psychosocial characteristics but is becoming increasingly recognized that the physical environment needs to also align with working patterns and the psychological characteristics of the occupants (Haynes, 2012). Workplace concepts are meant to link the space, work arrangements, processes, and enabling technologies with organizational and managerial strategies (Ekstrand & Hansen, 2016).

Workplace designs need to match their users' preferences and promote an optimal performance. For Roskams & Haynes (2019) a workplace should be free of physiological and psychological restraints and abundant in elements that stimulate and motivate its occupants.

The location of the office, the concept, and quality of the design reflect the characteristics of the organization, the quality of the work and the satisfaction expected from the employees (Plijter, Van der Voordt, & Rocco, 2014). This bounces back to Arkesteijn & Nase (2018) argument that value creation ultimately needs to put employees and culture at the center. And, at the same time, this argument contradicts Theurillat, Rérat & Crevoisier (2015) statement on the tendency of the CRE to not involve end users in the process but, as Shimono (2017) points, turn to the common practice of appoint and drag managerial stakeholders resulting in the employees' interests being represented in the form of company policies or spokespersons.

Interactions and behaviors inside the workplace are framed by the OC, however, in global companies the national culture also influences the RE decisions and consequently the workplace characteristics (Plijter, Van der Voordt, & Rocco, 2014). In the outer layer of a culture are practices, symbols, heroes, and rituals that guide our behavior, and at the core lay the values that shape broadly our tendency to choose preferences (Hofstede & Hofstede, 2005).

OC operate along 5 cultural dimensions characterized by: (1) the power distance perception, (2) the degree of collectivism versus individualist behaviors, (3) gender structures of femineity and masculinity, and (4) stronger or weak strategies to avoid uncertainty and (5) long or short-term goals orientation (Hofstede & Hofstede, 2005). Some of these dimensions have a possible link with the characteristics of workplaces, Roskams & Haynes (2019) chose this approach to analyze workplaces from four aspects:

1. Segregation: is the extent to which the workplace is segregated or open, this is found to be linked to the levels of concentration required, stress, distraction, levels of interaction, extroversion of the employees and demographic characteristics such as age and gender.
2. Territoriality: is the adoption level of offices without assigned desks and that restrict the possibilities of personalization of the space therefore discouraging the home-feel, a high territoriality would for example support a hierarchical organization.
3. Individual environmental control: the extent to which an employee can alter the environmental conditions to achieve comfort.
4. Aesthetic quality: the perceived aesthetic quality of the space.

Assessments of workplaces can also depart from the typology of the floor plan, number of people in the office, placing of the management, functions and facilities, place for meetings, privacy, and relationship with the outdoors (Plijter, Van der Voordt, & Rocco, 2014).

Associations between OC and qualities of the design of the workplace do exist and impact the overall well-being and productivity of employees. However, the preferred qualities and their hierarchy are not yet concisely researched which is why there is no clear direction towards what qualities should be prioritized among others or which characteristics are most strongly associated with divergent workplaces capable of producing employee satisfaction and productivity (Roskams & Haynes, 2019).

Typically, workplaces have a partially open-plan-shared environment intended to optimize, by sharing uses, the square meters while also targeting to provoke interactions, collaboration, knowledge sharing and social connections. This trend is called shrinking office and has led to a threshold office area of 9 square meters per person (O'Rourke, 2021).

Several cultural and organizational aspects challenge a workplace adoption such as management and employee attitude, leadership, employee behavior, needs for attachment and belonging, cultural values and norms, organizational habits and change training. A successful implementation requires continuous improvement and adaptation processes where wicked problems are explored, and conceptual aspects evolve (Ekstrand & Hansen, 2016), furthermore, any change in the values of a culture is usually slow which is why is important to acknowledge the challenge in designing any cultural related transformations (Hofstede & Hofstede, 2005).

The workplace has become a strong driver of competitive advantage defining the unique brand and culture of an organization (O'Rourke, 2021). But beyond its aesthetic value there is a need to focus on the functional program and occupant needs towards making the design process cyclical by gaining feedback from the space and continuously improve it (Zimring & Reizenstein, 1980).

The outcomes of a workplace design go further than supporting organizational cultures and financial budgets. Working involves a reward which is linked to the release of dopamine that enhance learning and motivational functions (Hamid, et. al., 2016), meaning that an overall good working experience can have a potential impact on mental wellbeing and in the opposite direction a bad working experience can diminish mental health.

A workplace shape and attributes can potentialize the work towards an autonomy supportive climate where the employee is oriented towards decision making, autonomy, work planning and flexibility; a competence supportive climate to facilitate feedback, appreciation, and supportive management work; or a relatedness climate that reflects social support, trust and sense of community. The way a workplace is conceptualized can motivate a drive of an individual behavior towards his or her work (Karanika-Murray & Michaelides, 2015).

Outside the office walls, the workplace matters. One possible method for tackling traffic congestion is to make major transformative changes in the work practices and the needs of commuting (Akbari & Hopkins, An investigation into anywhere working as a system for accelerating the transition of Ho Chi Minh city into a more livable city, 2018), long term life decisions such as place of residence, workplace and transportation are often linked whereas choices of where to live and where to work are mutually dependent (Guan & Wang, 2020).

This literature review is useful to establish the following assumptions in relation to workplaces:

- The workplace reflects the brand and culture of an organization.
- Is possible to link the office floor plan qualities to characteristics of organizational culture and other cultural dimensions.
- The typical open office is intended to support sharing, interaction, collaboration, and social activities, however, there are different climates under which this can happen that are related to the way and drive of the work.
- The qualities of the office space affect the satisfaction and performance of employees.
- Satisfaction at work impacts mental well-being.
- Some long-term personal choices are influenced by the workplace location.
- The workplace concept needs to align the space, work, and technology with the organization management.
- Cultural changes in the workplace are possible but they require continuity in the strategic plan.

### 3.3. Digitalization and pandemic effects on RE and workplace choices

The digital workplace blends the physical, cultural, and digital elements in the work environment, implying a complex set of practices that involve elements of organizational culture, ways of working, leadership, and interactions. (Marsh, Perez Vallejos, & Spence, 2022).

The COVID-19 pandemic forced the need for new ways of working to enable continuity and productivity while protecting our health catalyzing the digitalization of how we live and work. Nevertheless, prior to the pandemic, working from home was a model already

running from some companies with a 60% of acceptance (O'Rourke, 2021) this mainly possible as consequence of digital enabling technologies primarily from information and telecommunication.

The digital dimension calls for giving work a different understanding. When work is enabled via the Internet, it gets standardized, partially substituted thru digitalization, and it requires the development of platforms to produce and allow the digital work to happen. This understanding is almost always neglected by workers and consumers of such technologies due to the invisibility and dispersion of what's digital (Ruiz Ben, 2020).

It is important to raise the topic that digital working excludes majorly manual labor workers (Charalampous, Gran, Tramontano, & Michailidis, 2019), plus poverty circles and minority populations with limited access to technology. Prior to COVID-19, it had its niche in the millennial generation and the so-called digital nomads who sought to pursue a job that allowed travel, flexible hours and a departure from the traditional office scheme and the routines of modern life (Nash, Hossein, Sutherland, & Philips, 2018). Moreover, attraction of digital talent has permed the economic policy discourses and is becoming a concern for planners to provide space suitable for the digital economy that preaches for creative austerity measures with the intent to generate more growth (Pajevic, 2021).

Removing the place dependency allows breaking the traditional work time schedule and moving out from an assigned workplace to home or a coffee corner (Burnford, 2019). However, in some cases, remote working still requires some degree of linkage to the physical office while being fully home based or flexible.

In the physical office digitalization has been introduced in the form of mobile technology, standardized equipment and software, multiple monitors, booking systems and share point solutions which have a role in enabling operational flexibility, cost reduction, efficiency, collaborative culture, and work autonomy (Ekstrand & Hansen, 2016). In this regard Brummelhuis et.al (2012) identified a boost in process control and efficient communication as the main benefits of the new digitalized ways of working whereas strong transformational leadership was required to align the way of work with employee engagement.

Innovations in IT facilitate integrated workplace management systems (IWMS) to help organizations record, measure, manage and optimize RE assets and their inter-relationships by allowing to associate people to locations, assets, costs, hierarchies, etc. which can build up the portfolio analysis from just a cost perspective (Maslesa & Jensen, 2019) and opening a new understanding of the use and performance of the space.

The urge to quickly respond to optimization requests led to the emergence of flexible workplace models, where buildings look to be able to cope with restacks, alterations, and renovations to create a wide range of opportunities as well as enabling business restructuration's and the implementation of new technology. In this process flexibility of location also has relevance (Ekstrand & Hansen, 2016).

The sprawl of the geography of work has influenced the proliferation of coworking spaces, first aiming to attract flex workers with an intended cost-saving strategy (Pajevic, 2021) and lastly by promoting new ways of working, attractive spaces and locations, work-life balance, economy efficiency, sustainability and regional development

to different organizations that look to enable physical flexibility, quality workplaces, amenities, home proximity, short leases, share equipment's and decentralized connectivity to enterprises (Kojo & Neonen, 2017).

Coworking as a RE model has turned out to be disruptive by challenging each industry vision of the workplace and fostering the adoption of the shrinking office. Companies no longer must provide facilities for all employees, and opposing traditional strategies, owning office facilities is becoming less and less desirable. Many firms that used to own office RE have put their buildings for sale and potential buyers are looking at potential redevelopment options which might be restrained by land-use plan approvals. Nowadays companies are rarely interested in acquiring buildings and with less space dependency for offices many buildings can be at risk of vacancy (Pajevic, 2021).

Additionally, coworking buildings put pressure on the creation of more flexible leases by other market players. Some coworking offers no longer operate under lease schemes but as service providers of pay-per-use offices and meeting rooms. Firms with the biggest budgets are able to pay for more flexibility putting new locks on the RE market for smaller companies which creates the need to understand the broader consequences that this increased flexibility could bring to ensure we understand and regulate the possible negative impacts and the fairness of the market as, for example, secondary businesses that survive on the traffic attracted by the always busy business centers would also get severely affected by a drastic re-densification of business districts (Pajevic, 2021).

On the organizational level, transition and embracement of flexibility require engagement from human resources and management in a wider organizational context as the "socio-spatial contract" gets affected and challenges to new ways to lead, learn and manage (Ekstrand & Hansen, 2016). Coworking places integrate physical, virtual and social intelligence into workplaces for mobile workers (Kojo & Neonen, 2017) but only becomes a win-win situation when the individuals and organizations concerns meet in order to not create a wicked problem (Ekstrand & Hansen, 2016).

One of the challenges the increased flexibility brings to some workers is the ability to match free time with the people they share activities bringing attention to the social dimension of time in relation to work and leisure, as well as the overall value of personal time (Brown, Bradley, Lingard, Townsend, & Ling, 2011).

On the employee side, the acceptance and satisfaction from these new trends are linked to the nature of the work and some features of personal preferences (Roskams & Haynes, 2019). It must not be forgotten that working interactions are a social activity which has beneficial impacts on our levels of satisfaction, and positive emotions which are in danger of getting diminished or suppressed by the isolation of remote working (Charalampous, Gran, Tramontano, & Michailidis, 2019).

To a greater or lesser degree remote and hybrid working are here to stay, and, while both strategies provide benefits, they also bring a new source of stress and anxiety that force organizations and employees to understand a new order of digital work model that if not clearly delineated will lead into blaming the employees for the own system failure (Marsh, Perez Vallejos, & Spence, 2022).

Attention must be brought to the organization's technological environment, its demand, the norms related to it, the physical environment and the dark side effects which literature refers mostly as technostress, overload, addiction, anxiety, and invasion into

non-work life. If the norms and expectations around how to use technology are not clear it can originate stress among the limits of availability and the urge to respond quickly (Marsh, Perez Vallejos, & Spence, 2022).

During the COVID-19 pandemic the traditional workplace dynamic was shocked and the mass move to home and flexible working had its consequences in the office market. Under the uncertain climate of the pandemic, entrepreneurs and business managers took a “wait and see” attitude towards place decisions, space enquires were placed on hold meaning that the traditional office model was not pointed to disappear but put on the table for discussion. Vacancy levels increased in 2021 due to cost saving strategies, and the new and refurbished buildings caused an excessive supply of secondary locations (CBRE Research, 2021).

Work from home trend gained momentum with still unknown consequences, however, is expected that the added value provided by an office space will become a weighting factor of decision in a future of office occupiers becoming more critical in their real needs, quality, technology, accessibility, and health features in a workplace. (CBRE Research, 2021)

There is a suggested displacement that occurred as consequence of the COVID-19 lockdowns, the outside invaded the inside and, with the psychological access to the outside blocked, the ways to navigate social contexts got affected by stress. Among other issues there is a challenge in the meaning and purpose of flow dynamics, people-place bonds, home configuration, new roles, health, wellbeing, and virtual social encounters (Devine-Wright, et al., 2020).

O'Rourke (2021) suggests a 3-stage workplace transformation model with the head office retained as a strong expression of the organization values and local smaller offices distributed to allow the retention of the benefits from staying close to home, such as meet the demands of personal life, less commuting, optimize time and place flexibility. The adoption of this strategy will boost the local community life, driving a renaissance of the suburbs, and re-densify the working population from the inner cities. However, it must be kept in sight that any investment in CRE transformations is tightened to the creation of jobs that require office spaces as a need for value creation (CBRE Research, 2021).

The main preference for office spaces remains to be well-located multi-tenant buildings of long-term contracts which is why these buildings keep retaining occupancy and price levels (CBRE Research, 2021), this acknowledged trends puts pressure on the possibility of a decentralized office model suggested by O'Rourke.

To support further the plea, O'Rourke (2021) argues that the transformation needs a new “workplace contract” that ensures health safety and economic recovery by unlocking the productivity potential offered to employees through new ways of working, new levels of flexibility and autonomy. Similarly, remote working needs a new psychological contract where individuals acknowledge the trust they are given and do not forget each other importance even when they are not physically present (Charalampous, Gran, Tramontano, & Michailidis, 2019).

A big remark must be made about the fact that the associations between flexible working practices and employee well-being are not yet conclusive. Some argue flexibility enables greater work-balance, job autonomy and effectiveness, and parallel research

suggests it is associated with guilt feeling and over work conducts (Charalampous, Gran, Tramontano, & Michailidis, 2019).

All these topics should become the drivers of how, where and when we work, and a new workplace model will have to offer the best of centralized/decentralized and collaborative/private working. While a group of workers desire to retain the benefits of working from home, some look forward to return to the office and the benefit it offers to their personal productivity and over-all state of well-being, but also the social interactions, friendship of work and richness of being part of a team (O'Rourke, 2021).

It is expected that the future workplace integrates technology, place, and people in a more seamless way to deliver an experience focused on services of support agility, hubs and connectors to the brand and values, attraction and retaining of staff, enhanced well-being, and productivity; and provide interaction, collaboration, and innovation. The role of workplace managers must evolve from a business management function to a people-centered experience focused. They must put themselves in a critical position to connect these new drivers to the business via innovative business plans and focus on the people beyond the provision of physical spaces (Harris, 2019).

This literature review is useful to establish the following assumptions in relation to the impacts of digitalization and COVID-19:

- There is a blend between the physical, the digital and the culture in nowadays workplaces.
- Innovations in IT allow for analysis of more data and change the understanding of the use and performance of the space.
- Digitalization can lead to exclusion.
- Tights between employee and organization are different.
- Norms on the use of technology should be understood by employees to avoid causing negative impacts.
- There are motivations for flexible working related to personal lifestyle, and business objectives.
- Flexibility challenges the socio-spatial contract entailing a wider organizational context action plan for its implementation.
- COVID-19 questioned the real need for an office, and the market became more critical towards its characteristics.
- The current complexity of reality needs a new workplace contract.

### 3.4. Conceptual framework

Following the literature assumptions, the framework for this research, *Figure 1*, represents a linear process started by the PDA documents and RE team which together produce a vision of the workplace that triggers the CRES to produce certain office characteristics that contribute to a working experience.

This linear production is influenced by digitalization trends which might or not be owned by the vision but have an impact on the culture, the employee, the resulting work experience, and the market trends represented by REP.

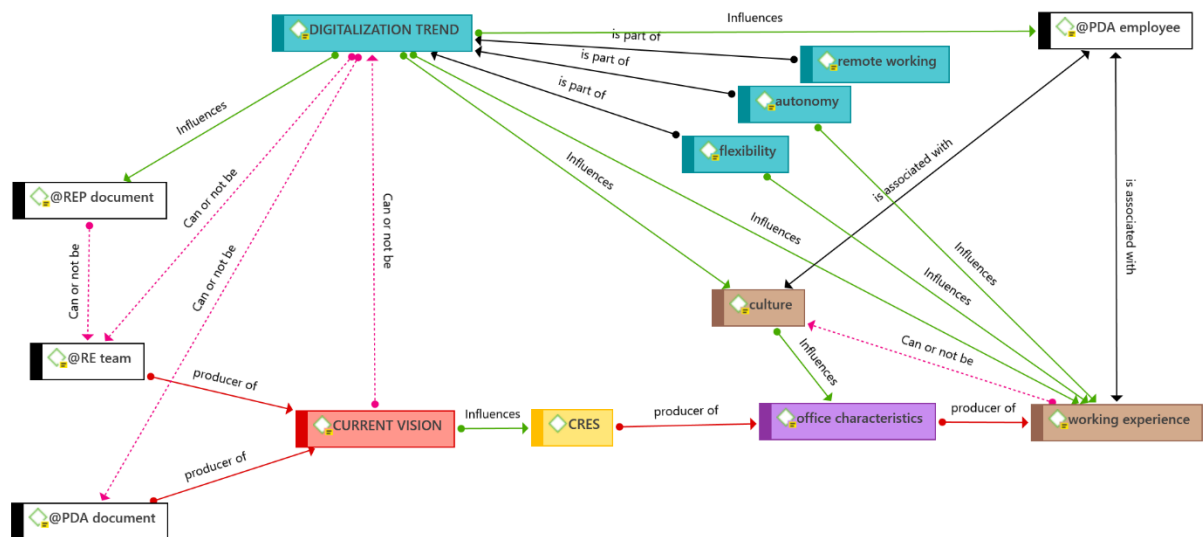


Figure 1 Conceptual framework model.

To be able to focus on different relationships of the model and to inform the research questions three assumptions were formulated to test them against the findings of the research.

- *Assumption 1: The CRES has not reacted to the new complexity of working derived from digitalization.*

Traditionally the CRE looks to provide an adequate space for people to deliver an optimal level of productivity, promote the brand to customers, employees, partners, and minimize costs (Nourse & Roulac, 1993). Companies that understand that value is created by the employee will put them at the center by caring for their satisfaction and wellbeing in the workplace, and providing a quality concept that reflects the brand message and expectations (Plijter, Van der Voordt, & Rocco, 2014) (O'Mara, 1999). However, digitalization trends enabled employees to perform equally or better by providing employees the full control to choose their best work environment which does not necessarily means the office. Drivers, of the strategy have not been updated to the new implications of digitalization.

- *Assumption 2: The working experience is no longer understood by the vision.*

Digitalization changed the value and perspectives of the employees on relation to work dynamics, wellbeing, place bond and social encounters (Devine-Wright, et al., 2020). The current vision is missing to fully account for the changes on work experiences accountable to the digitalization and to steer them in support of the strategy.

- *Assumption 3: Digitalization has increased the relevance of the role of the employee in the CRES*

The employee as the center of value creation is key to achieve strategic success (Plijter, Van der Voordt, & Rocco, 2014) (O'Rourke, 2021) which is why it has earned its place as a driver of CRES. However, digitalization jumped directly to them in the rush of digital implementation and now integrating them is a key piece to move from a linear conceptualization of workplaces to a circular and more holistic one.

## 4. Methodology

Interpretative approach to science assumes everyone has their own perspective and view of reality, meaning that the experience, values, and meanings assigned to a certain event are particular to an individual or group. In such approach, the phenomenon is examined under a case study which allows to gather and analyze data from complex and non-numeric variables (Van Thiel, 2014). This approach fits the research as per the ad-hoc, non-replicable and culture dependent considerations appointed in the theory.

The aims of the research require an exploratory approach which is adequate for cases in which the phenomenon has little empirical scrutiny and has long been developing under circumstances that have now changed (Stebbins, 2001). Understanding the impacts of digitalization benefits from the open-mindedness that can potentially link new concepts to existing theories.

This case study is set at Philips Domestic Appliances global headquarters located in Amsterdam, the choice for this was driven primarily because it was my internship organization and that provided me access to the data sources, and secondly because the company had ongoing discussions regarding the future of the portfolio in the light of lease expire dates, change of ownership and drafting a new workplaces accountable for the low occupancies reported after the COVID-19 restrictions were lifted.

### 4.1. Research strategy

The case study was informed by document analysis and interviews. The selection of a case study strategy provides a holistic approach (Van Thiel, 2014) which fits the deductive research and the particularities of the main concepts addressed by the literature. All the research took place in a real-life setting contained by the organization involved.

Document analysis was chosen to learn the meaning and empirical knowledge of the workplace, CRES, and digitalization impacts. It fits the research because the organization produces documents to communicate conducts, guidelines, standards, and values that have an impact on the CRES and the perception of the employees as part of the organization in relation to their work behavior and the workplace. Developers also produce documents to report the state of the markets, characteristics of the offers and trends mostly with a marketing goal of influencing future choices.

Documental research can bias on the alignment with corporate values, meaning that the initial purpose of the documents is not aligned with the research purposes and can reflect a rather optimistic or ideal corporate discourse, however, is possible to address this issue by confirming and contrasting the findings with interviews (Morgan, 2022). Some of the analyzed documents are not made for public use, therefore anonymity, confidentiality and vulnerability issues are addressed.

Through interviews researchers can gain insights into the lived experiences, learn the perspectives of the participants, and discover the nuances in listening how stories happened (Van Thiel, 2014). Interviews are the most suitable method to extract the employees' experience of digitalization, the workplace and work experience which is not documented anywhere else and vital to the research. Interviews with the RE team members are also a way to probe the literature assumptions and documental research.

The main limitation of the selected approach is the difficulty in determining the validity of the findings. In this kind of research, validity relies on the accuracy and precision of the design and report of the data. The correctness of the operationalization comes from supervision, peer reviewing as well as confrontation of findings between the two proposed methods (Van Thiel, 2014). External validity, however, is restricted by the conditions of the case, however, the broad trend of physical, digital and hybrid workplaces could benefit from the findings of this research as per established on the societal relevance.

Reliability will come by achieving a comprehensive analysis with enough details to be able to be repeated within organizations facing similar scenarios.

#### 4.2. Data collection

Documents were selected as per their relation to the concepts studied in this research. PDA documents consisted of organization reports, internal policies, internal strategies, organization communications. The documents were the latest published version and were retrieved from the PDA archives, some are accessible to all employees and some only to RE team members, the authors of the documents vary but they all speak in the name of PDA as an organization. REP documents consisted of market reports and commercial brochures retrieved from their websites and related to the topic of the research.

The documents meant for public use are included in the primary data sources, whereas non-public documents are reported on due to the general business principles policy of PDA. To provide authenticity, representativeness, relevance and meaning to the document report the name of the document is included as well as the source, the date, the quotes, and content of the documents that were relevant to this research.

The selection of interviewees was given by their expertise, involvement, and ownership of the CRES. Owners of CRES were directly appointed by their business role in PDA as Head of RE, Portfolio & Workplace Manager, Operations Manager, and Transaction Manager & Project Manager these respondents are considered to give voice to the RE team as a speaker in this research. The local HR representative was also appointed to contribute to the employee's voice and perspective. REP associated with PDA were invited to the research to report on the extent they can influence results from CRES and their views on the broad trends.

As per the employee sample the literature recognizes a very broad variety in workplace preferences with the main differences being the type of tasks that they perform, their gender and OC (Roskams & Haynes, 2019) (Hofstede & Hofstede, 2005) as the containing OC is a common variable the selection of interviewees focused only on achieving variety of gender and tasks resulting in 2 male and 3 female respondents from tax, marketing, sustainability, creation and data analytics.

For each group of respondents (RE team, REP, HR representative and employees), a different interview guide was drafted as their involvement with the CRES is different.

Questions to the RE team were in relation to their perceived priorities of the CRES, the RE message to the employees, experiences implementing remote working, and the perceived role of the RE facing digitalization, cultural diversity, and the future. As HR is

also a building pillar for the work experience the interview aimed for the same objectives apart from the CRES priorities which are not in their scope of responsibilities.

The interview guide for the employees aimed to obtain a description of the work journeys when working at the office and when working remotely as well as the importance of the physical location and having the possibility of working remotely. It also targeted the level of awareness and engagement with the RE functions. For the last part of their interview, they were asked to select their preferences upon a different selection of buildings, workstations, and collaboration spaces with the intention to test their assumptions and quality values upon different RE choices that they usually are not involved in. The images shown to them were selected to represent a diverse and contrasting characteristics of corporate buildings and inside spaces.

REP interview guide aimed to report their involvement, perception of the current trends and understanding of PDA CRES.

The research proposal for this thesis project was presented to the head of RE and security of PDA as well to the RE managers and was agreed on within compliance with GDPR and GBP policies. In total 33 documents were retrieved or produced to inform the research

Primary data summary			
Name of Document	Date	Source	File name
IT & Real estate introduction	April 2021	Real estate, PDA	DA Document report.docx
DA Buisines System	July 2021	HR, PDA	DA Document report.docx
DA HR Organization	July 2021	HR, PDA	DA Document report.docx
Coronavirus update	March 2022	HR, PDA	DA Document report.docx
Our DA Culture & Behaviours	July 2021	HR, PDA	DA Document report.docx
Voice of employee	Q1 2022	HR, PDA	DA Document report.docx
DA diversity & Inclusion Framework	July 2021	HR, PDA	DA Document report.docx
Tips for self-care	July 2021	Health & security, PDA	DA Document report.docx
Our transformation journey	May 2022	IT & Exuviate, PDA	DA Document report.docx
Stay or go	March 2022	Real estate, PDA	DA Document report.docx
Scorecard DA RE	November 2020	Real estate, PDA	1 Document PDA.pdf
DA Request for proposal	August 2013	Real estate, PDA	2 Document PDA.pdf
Phillips RE Acoustic Directive	March 2020	Real estate, PDA	DA Document report.docx
Phillips RE Standard furniture directive	May 2019	Real estate, PDA	DA Document report.docx
Security zoning standard	December 2020	Security, PDA	DA Document report.docx
Company space standards document	December 2020	Real estate, PDA	3 Document PDA.pdf
Phillips global workplace solutions	February 2019	Real estate, PDA	4 Document PDA.pdf
DA Real estate strategy discussion	October 2021	Real estate, PDA	5 Document PDA.pdf
Interview transcript HR	21 June 2022	HR, PDA	5 Transcript.docx
Audio source HR 051	21 June 2022	HR, PDA	051 Recording.mp4
Audio source HR 052	21 June 2022	HR, PDA	052 Recording.mp4
Audio source HR 053	21 June 2022	HR, PDA	053 Recording.mp4
Interview transcript RE1	7 July 2022	Real estate, PDA	1 Transcript.docx
Audio source RE1	7 July 2022	Real estate, PDA	1 Recording.mp4
Interview transcript RE2	7 July 2022	Real estate, PDA	2 Transcript.docx
Audio source RE2	7 July 2022	Real estate, PDA	2 Recording.mp4
Interview transcript RE3	7 July 2022	Real estate, PDA	3 Transcript.docx
Audio source RE3	7 July 2022	Real estate, PDA	3 Recording.mp4
Interview transcript RE4	7 July 2022	Real estate, PDA	4 Transcript.docx
Audio source RE040	7 July 2022	Real estate, PDA	040 Recording.mp4
Audio source RE041	7 July 2022	Real estate, PDA	041 Recording.mp4
Interview transcript EMP1	12 July 2022	PDA	6 Transcript.docx
Audio source EMP1	12 July 2022	PDA	6 Recording.m4a
Interview transcript EMP2	14 July 2022	PDA	7 Transcript.docx
Audio source EMP2	14 July 2022	PDA	7 Recording.m4a
Interview transcript EMP3	18 July 2022	PDA	8 Transcript.docx
Audio source EMP3	18 July 2022	PDA	8 Recording.mp4
Interview transcript EMP4	19 July 2022	PDA	9 Transcript.docx
Audio source EMP4	19 July 2022	PDA	9 Recording.mp4
Interview transcript EMP5	28 July 2022	PDA	11 Transcript.docx
Audio source EMP5	28 July 2022	PDA	11 Recording.mp4
Interview transcript REP1	22 July 2022	CBRE	10 Transcript.docx
Audio source REP1	22 July 2022	CBRE	10 Recording.mp4
IWG Enterprise Mebership program playbook	April 2022	IWG	1 Document REP.pdf
Office of the future revisited	2022	C&W	2 Document REP.pdf
Workplace solutions	25 July 2022	CBRE	3 Document REP.pdf
Mixed-Presence collaboration key to successful H	2022	CBRE	4 Document REP.pdf

Table 3 summarizes them.

Primary data summary			
Name of Document	Date	Source	File name
IT & Real estate introduction	April 2021	Real estate, PDA	DA Document report.docx
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DA diversity & Inlcusion Framework	July 2021	HR, PDA	DA Document report.docx
Tips for self-care	July 2021	Health & security, PDA	DA Document report.docx
Our transformation journey	May 2022	IT & Exuviate, PDA	DA Document report.docx
Stay or go	March 2022	Real estate, PDA	DA Document report.docx
Scorecard DA RE	November 2020	Real estate, PDA	1 Document PDA.pdf
DA Request for proposal	August 2013	Real estate, PDA	2 Document PDA.pdf
Philips RE Acoustic Directive	March 2020	Real estate, PDA	DA Document report.docx
Philips RE Standard furniture directive	May 2019	Real estate, PDA	DA Document report.docx
Security zoning standard	December 2020	Security, PDA	DA Document report.docx
Company space standards document	December 2020	Real estate, PDA	3 Document PDA.pdf
Phillips global workplace solutions	February 2019	Real estate, PDA	4 Document PDA.pdf
DA Real estate strategy discussion	October 2021	Real estate, PDA	5 Document PDA.pdf
Interview trancript HR	21 June 2022	HR, PDA	5 Transcript.docx
Audio source HR 051	21 June 2022	HR, PDA	051 Recording.mp4
Audio source HR 052	21 June 2022	HR, PDA	052 Recording.mp4
Audio source HR 053	21 June 2022	HR, PDA	053 Recording.mp4
Interview trancript RE1	7 July 2022	Real estate, PDA	1 Transcript.docx
Audio source RE1	7 July 2022	Real estate, PDA	1 Recording.mp4
Interview trancript RE2	7 July 2022	Real estate, PDA	2 Transcript.docx
Audio source RE2	7 July 2022	Real estate, PDA	2 Recording.mp4
Interview trancript RE3	7 July 2022	Real estate, PDA	3 Transcript.docx
Audio source RE3	7 July 2022	Real estate, PDA	3 Recording.mp4
Interview trancript RE4	7 July 2022	Real estate, PDA	4 Transcript.docx
Audio source RE040	7 July 2022	Real estate, PDA	040 Recording.mp4
Audio source RE041	7 July 2022	Real estate, PDA	041 Recording.mp4
Interview trancript EMP1	12 July 2022	PDA	6 Transcript.docx
Audio source EMP1	12 July 2022	PDA	6 Recording.m4a
Interview trancript EMP2	14 July 2022	PDA	7 Transcript.docx
Audio source EMP2	14 July 2022	PDA	7 Recording.m4a
Interview trancript EMP3	18 July 2022	PDA	8 Transcript.docx
Audio source EMP3	18 July 2022	PDA	8 Recording.mp4
Interview trancript EMP4	19 July 2022	PDA	9 Transcript.docx
Audio source EMP4	19 July 2022	PDA	9 Recording.mp4
Interview trancript EMP5	28 July 2022	PDA	11 Transcript.docx
Audio source EMP5	28 July 2022	PDA	11 Recording.mp4
Interview trancript REP1	22 July 2022	CBRE	10 Transcript.docx
Audio source REP1	22 July 2022	CBRE	10 Recording.mp4
IWG Enterprise Mebership program playbook	April 2022	IWG	1 Document REP.pdf
Office of the future revisited	2022	C&W	2 Document REP.pdf
Workplace solutions	25 July 2022	CBRE	3 Document REP.pdf
Mixed-Presence collaboration key to successful H 2022		CBRE	4 Document REP.pdf

Table 3 Primary data summary

All interviewees were formally invited to respond to the research via an e-mail containing the necessary information to transparently agree to having the interview. Interviews were conducted and recorded person to person at the PDA office or via teams meeting software.

### 4.3. Data analysis

Documents and interview transcripts were analyzed via thematic coding using Atlas.ti. The coding system (Table 4) was built up in coding rounds, first by assigning speaker roles corresponding to the source of the information, then the main topics of the research questions and finally the initial concepts appointed by the literature review.

	Code	Comment
<b>Speaker</b>	@PDA document	Source is a PDA document <sup>[P]</sup> <sub>[SEP]</sub>
	@PDA employee	Source is a DPA employee <sup>[P]</sup> <sub>[SEP]</sub>
	@RE team	Source is the interviews with CRES owners at PDA <sup>[P]</sup> <sub>[SEP]</sub>
	@REP document	Source is a document from real estate partners <sup>[P]</sup> <sub>[SEP]</sub>
	@REP team	Source is the interview with the real estate partner <sup>[P]</sup> <sub>[SEP]</sub>
<b>Research topics</b>	CURRENT VISION	Statements from documents or CRES owners that describe the VISION of the workplace. Vision is understood as the plans and future for the workplace. <sup>[P]</sup> <sub>[SEP]</sub>
	DIGITALIZATION TREND	Trends derived from digitalization are: working from home, shared desks, communication and cloud tools, work flexibility on time and location, shrink office, acitivity based models. <sup>[P]</sup> <sub>[SEP]</sub>
	DRIVER OF TRANSFORMATION	Factors that can develop in transformation of workplacig <sup>[P]</sup> <sub>[SEP]</sub>
<b>Initial concepts</b>	autonomy	Ability of employees to make choices upon the work and workplace <sup>[P]</sup> <sub>[SEP]</sub>
	brand	Something said about the workplace in relation to brand values <sup>[P]</sup> <sub>[SEP]</sub>
	cost	Something is said about cost <sup>[P]</sup> <sub>[SEP]</sub>
	culture	Something is said that represents the culture in ways of working or the workplace. Culture stands for power
	employee	Reference to the role of the employee in the CRES <sup>[P]</sup> <sub>[SEP]</sub>
	flexibility	Work and workplace is easily modified or changed <sup>[P]</sup> <sub>[SEP]</sub>
	impact to the strategy	A quality of the CRES that is meant to impact the broader company strategy <sup>[P]</sup> <sub>[SEP]</sub>
	inclusion	Equal access to opportunities and resources to all <sup>[P]</sup> <sub>[SEP]</sub>
	liked qualities	Positive things or experiences <sup>[P]</sup> <sub>[SEP]</sub>
	location	Something is said about the relevance of the location and its qualities <sup>[P]</sup> <sub>[SEP]</sub>
	office characteristics	Qualities of the physical office <sup>[P]</sup> <sub>[SEP]</sub>
	ownership	Something is said in relation of space ownership <sup>[P]</sup> <sub>[SEP]</sub>
	remote working	Something is said about remote working. Remote working is defined as work that isnt location dependant and can be done also from home. <sup>[P]</sup> <sub>[SEP]</sub>
	standarization	Something said in relation to the use of standars in CRES and workplace <sup>[P]</sup> <sub>[SEP]</sub>
	sustainability	Something is said about sustainability in CRES <sup>[P]</sup> <sub>[SEP]</sub>
	uncertainties	Something is uncertain now or at the future <sup>[P]</sup> <sub>[SEP]</sub>
	unliked qualities	Negative quealities or experiences <sup>[P]</sup> <sub>[SEP]</sub>
wellbeing	Comfort, health and happiness	
working experience	Something is said about the working experience in the workplace <sup>[P]</sup> <sub>[SEP]</sub>	

Table 4 Code analysis

Atlas.ti allows building associations between the assigned codes to start constructing narratives. Each of the assumptions was approached as follows.

- *Assumption 1: The CRES has not reacted to the new complexity of working derived from digitalization.*

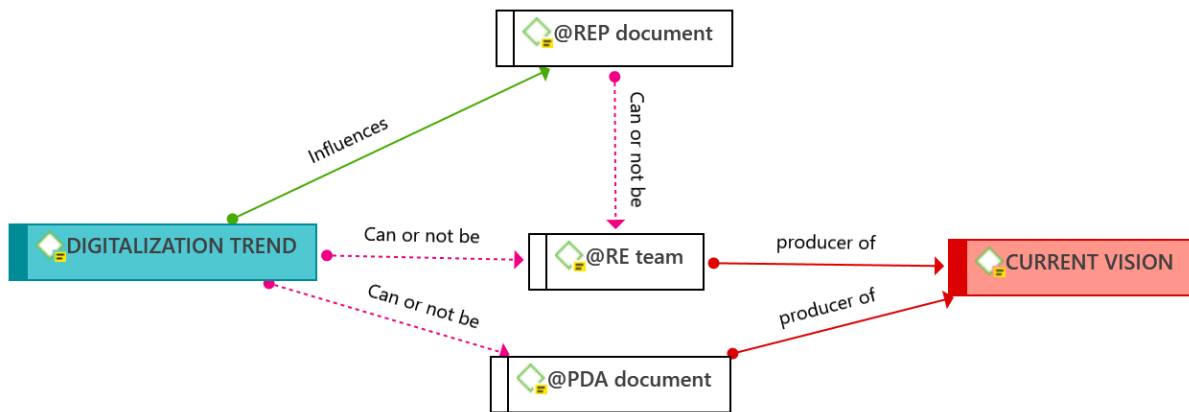


Figure 2 Diagram of Assumption 1 generated by Atlas.ti

Digitalization trends influenced the REP but could or not influence the RE team and the PDA documents which are the producers of the workplace vision and strategy.

Digitalization trends have or have not influenced the RE team and the PDA documents and therefore the current vision of CRES.

This model was designed to inform sub-questions one and two<sup>1</sup>, and to fill gaps related to updating the stakeholders' interests and evaluate assumptions on work placing and CRES, by proving the links between digitalization trends and the current documented vision. The found links should point to the impacts of digitalization and the reaction so far from CRES.

- Hypothesis 2: *The working experience is no longer understood by the vision*

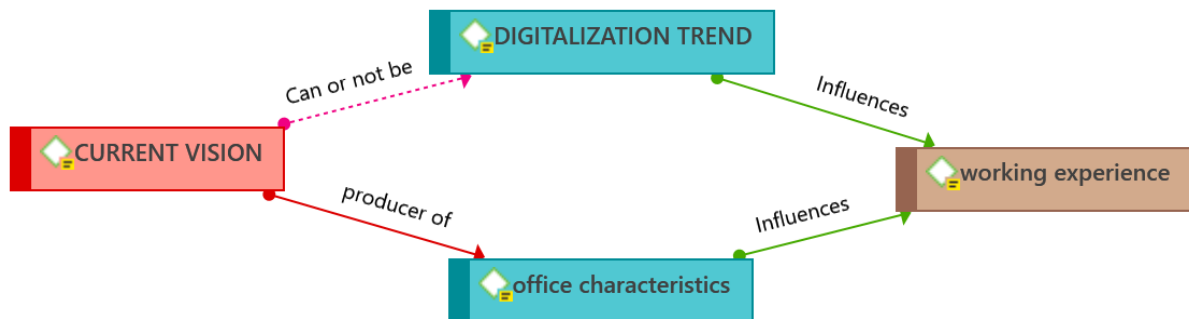


Figure 3 Diagram of Assumption 2 generated by Atlas.ti

The diagram represents that the current vision is the producer of the office characteristics, that influence the working experience, however digitalization trends also influence the working experience and can or not be considered by the current vision. This model helps to answer sub question number three<sup>2</sup> by assessing the extent to which the vision understands, and integrates the cultural state induced by digitalization, and to fill gaps in the potential of workplace reconstruction and re-evaluation of the assumptions of workplaces.

<sup>1</sup> Sub question one and two are: (1) What is the vision of the workplace according to the current CRES?  
(2) How are digitalization and derived trends currently considered by CRES?

<sup>2</sup> Sub question three is: How is CRES driving the transformation of workplaces?

- *Assumption 3: Digitalization has made relevant the role of the employee which is currently highly excluded from CRES*

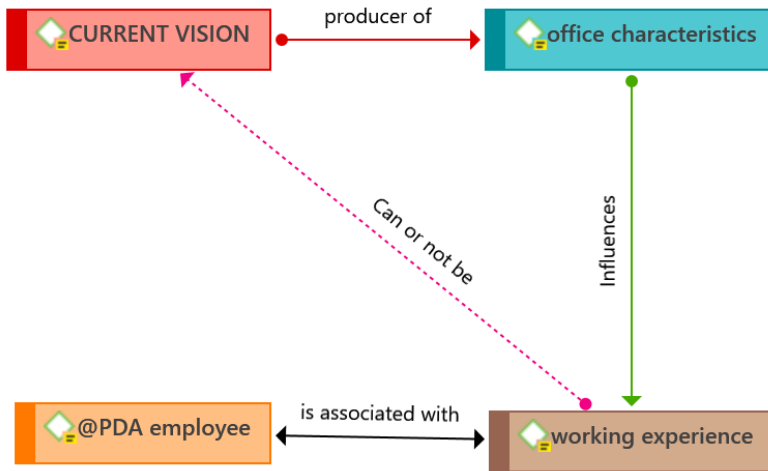


Figure 4 Diagram of Assumption 3 generated by Atlas.ti

The third assumption complements the answer to all research questions by exploring the changes in the role of the employee due to digitalization and therefore the work experience and its relation to the current vision and goals of CRES. It will also contribute to gaps such as understanding the impact of culture in the shape of the CRES model, question the traditional stakeholder involvement and updating the current interests of office occupiers.

Each assumption was analyzed according to its own conceptual diagram by targeting specific codes and the co-occurrence of codes to compare the differences between the perceptions of the different speakers towards the same concept.

#### 4.4. Research reliability and validity

Reliability of the research comes from the case study setting which allowed a direct approach to the topic, its context, and documents; and the diligent reporting of information.

The validity of this methodology comes from the purposive selection of documents and participants in the case study environment. PDA documents were selected on their relevancy towards the topics of “work”, “workplaces” and “culture”, and are available in the employee digital environment which means they are meant to be known by all employees. These documents are also a standard in corporate communications which makes this selection replicable in other cases. Documents coming from REP are also available for the public, other partners and specific to other geographies which is why they are also possible to replicate.

PDA real estate team were interviewed purposely as experts in the topic and owners of the strategy. As indicated in the literature review, a corporate approach to real estate is present in different enterprises making this choice replicable for other cases.

Employees are the experts in using the workplace. They were selected to represent a diversity of business roles which according to theory produces a diversity of results.

The structural design of this research is possible to replicate in other cases, and the results of replications would contribute to the enrichment of the discussion by adding perspectives of companies with other goals and cultures.

## 5. Results

### 5.1. Understanding of digitalization by the CRES

The first result obtained from the co-occurrence analysis (*Table 5*) was a very low grounding of concepts of digitalization in the PDA documents. Whereas these concepts were more often grounded between the RE team and the RE partners.

When adding the office characteristics to the analysis it was found that they were more frequent in the PDA documents than among between the RE team members. This puts in perspective the focus of the vision and the limited permeability of the digitalization trends on the CRES.

Digitalization was grounded highly in the REP documents but that is not considered significant as the selected documents main theme was directly related to the topic and because it is not a fact that it is influencing PDA strategy.

	○ @PDA document	○ @RE team	○ @REP document	○ @REP team
● autonomy	3	8	6	0
● DIGITALIZATION TREND	9	23	27	2
● flexibility	14	12	8	1
● remote working	9	31	16	3
● office characteristics	62	8	12	1

*Table 5 Co-occurrence of speakers and topics generated by Atlas.ti*

*Table 6* compares the grounding of CRES drivers in the current vision discourse and in the digitalization discourse. The most grounded driver of CRES among both was the employee, brand was not grounded in the digitalization trends and cost, standardization and sustainability were grounded very few times. For the current vision the employee is the most grounded driver, standardization, and sustainability the second, and brand and cost the third.

	● brand	● cost	● employee	● standarization	● sustainability
● CURRENT VISION	23	29	62	11	11
● DIGITALIZATION TREND	0	3	16	1	1

*Table 6 Drivers of CRES in current vision and digitalization trends. Generated by Atlas.ti*

The following sub-indexes provide a detailed report on the perceptions of the CRES drivers and their links to digitalization trends.

### 5.1.1. Brand

The PDA location selection process is driven by assessing the reputation of neighborhoods, the impression it makes on employees and partners, perception of the quality of the buildings and whether it matches the Philips brand. Some of these characteristics can be quite hedonic and subjective as there is no indication as to which characteristics would qualify a building to cause better or worse impression in relation to matching the brand. The score card is meant to be filled by each local team criteria so it can be assumed that there is no means for a global standard on this. According to team leaders the physical location is important to show the market and prospective talent the level of seriousness of the company.

Inside the walls, the goal is to achieve “company spaces that express the Philips brand identity” (Philips Global brand, 2020) this is linked with the aim of ensuring a Philips experience in all company buildings by expressing the brand identities and giving employees and guests a great working environment, this quality of the brand speaks as well to a standardization goal.

Two spaces are mentioned as key points to communicate the brand: (1) the entrance, welcome and reception area as the first interaction with the brand and source of a good first impression, and (2) transit areas such as lobbies, hallways, and hospitality areas where brand storytelling can happen thru wall applications.

For the overall strategy of PDA, a brand drive and digitalization are set as the main pillars in the business system that defines how to work. But key spaces to communicate the brand are transitional, meaning that they are not meant to be occupied for long which makes a weak argument on how the brand values are meant to be lived inside the working space.

For the RE team, the brand ranked number one as a strategy driver just for respondent 1 who expressed that it should be as is the main source of the business and values. For respondent 2 and 3 it scored in second place of importance because in their view the brand values on RE translate to standardizations which are less relevant than the employees’ own preferences on how and where to work. Therefore, the brand values always must translate to the local cultures putting the brand in second place.

Respondent 4 ranked the brand last because the employee satisfaction in terms of diversity and effectiveness of spaces results more relevant than strict aesthetic values that relate to a brand language.

A co-occurrence of digitalization trends and brand was not found but it is relevant to remark that both are a pillar of the busyness system, and, that the strategy behind creating a branded space is to achieve a work experience which includes accessibility to the office location, a building and neighborhood brand message and what the employee journey is when its inside, from the productivity point of view but also the social and brand engagement.

The connection of the brand to the work experience and the employee is further reported in the employee subsection of this chapter and in the third section of the results.

### 5.1.2. Cost

CRES evaluates, as a common practice, the rent costs for the area, parking spaces, storage, and other contributions to the landlords to make sure the choices are budget

achievable. Each location's net effective rent is evaluated in comparison with its overall quality. The REP and respondent 4 from the RE team agree that there is a correlation between better accessibility, amenities, atmosphere, and a greater cost. This is why respondent 4 points to standardizations as a mechanism of cost control.

The portfolio performance is reported in terms of total occupancy cost which connects the total square meters to their cost.

Remote working is a digitalization trend that impacts the CRES directly by enabling the possibility of reducing the square meters by either increasing working from home practices or completely working remotely. It was proposed as a possible strategic scenario that current footprints could be reduced with only limited impacts on the business and employee adaptability. In a more radical scenario, teams of up to 50 employees could be moved to remote working, therefore reducing the number of physical office hubs but with the risk of bigger impacts on business and on employee adaptability that could lead to losing talents.

Another important cost metric is the capital expenditure that usually gets indexed through the duration of a lease which is usually 3 to 5 years. Short leases are appointed by the literature as a strategic choice for companies with uncertainty about the future (O'Mara, 1999), however in the CRES is becoming common practice to look for flexibility and rolling breaks making long term discussions difficult.

Is common practice to not make big investments in a workplace until the end of the indexation periods which reduces the capabilities of the space to be majorly transformed and relates to the vision of spaces that are able to adapt to new ways of working. This is an important lock because unless there is no way to steer or predict the future ways of working the forecasting and planning of space investments is going to be impossible.

The RE team respondents do not agree with rank of the cost as a driver of the strategy. Respondent 4 rated it in second place because of the quality-cost correlation, whereas respondents 2 and 3 rated it in fourth and fifth place because while it is recognized as a driver to make decisions it shouldn't be a strong restraint for the projects but a consequence of establishing certain standards that enable certainty in to forecasting and controlling costs.

REP reported that supporting diversity in workstyles can drive financial benefits and savings which is an opportunity that the CRES sees thru remote working. However, remote working cannot be implemented as a strategy from a cost perspective if the cost is not the priority of the CRES and as much as the cost is not viewed as the main driver for the strategy the value perceptions of building characteristics, locations and interior design are directly correlated to it.

### 5.1.3. Employee

The broad PDA strategy acknowledges the employee as the value producer and considers him or her a pillar for the business. Some qualities expected of the people are being socially inclusive, having a learning culture, performance, and being reward oriented, growth mindset, working together and being daring. This set of qualities was found in documents produced by OC and HR.

The workplace is envisioned by the RE documents as an effective, innovative, and healthy place to support individual and team workstyles with the main goal of offering

the employees a value proposition. The main paradigm of this vision is the belief that people will perform at their best if they feel comfortable as in their own home. Home is also part of the brand promise which then tightens up the workplace concept with the brand.

The latest employee survey reported that recent and young employees feel less engaged towards the company, this issue is left to the managers to resolve and is not reported if there is any correlation of this to the qualities of the workplace. The survey also reported that employees feel they can be themselves in the workplace which is consistent with the features the OC finds desirable.

Under the RE perspective, employees are meant to be assigned to a team-neighborhood-area where they are expected to regularly sit and have a desk, chair, and monitor to work surrounded by their colleagues. They should also have access to facilities oriented to hospitality as pantries and cafes, closed collaboration rooms for meetings, presentations, workshops or other group activities, informal sitting spaces to work or meet, silent areas, phone booths and complementary spaces that can be country specific such as nursery or pray room.

To size and define which characteristics will be part of an office, the concept identifies four ways of working that reflect four workstyles: (1) Independent or individual tasks, (2) team tasks, (3) location dependent tasks and (4) confidential tasks. Depending on the time people spent on the different tasks is how the balance of the space should look, meaning that location dependent tasks will need more dedicated desks with some support spaces while independent tasks will get open sitting areas with support rooms and a wider diversity of settings to choose from.

To perform this workstyle analysis a local leader should be appointed to assign the team a way of working and then profile the headcount to a persona type that according to the time spent in the office is classified as (1) assigned, (2) office worker, (3) office traveler or (4) sales representative (Philips global workplace solutions, 2019).

Personas that don't belong to the assigned type are assumed to be willing to stick to certain sharing ratios which allows reducing the number of desks.

Open work areas are meant to be distraction free, and it is advised to not have long conversations at desk, to not walk in between them or take calls when sitting there. Meeting rooms must be accessible, and facilities are meant to be shared between all (Philips global workplace solutions, 2019).

The vision contemplates measuring the workplace effectiveness and employee satisfaction to benchmark performances and identifying best practices to improve the workplace solution. Currently the benchmark is set at 10 square meters per employee.

After COVID-19 it was instructed to adhere to activity-based working by trusting employees to choose their work setting as needed to produce the best work. All respondents reported they experienced a quick adaptation to working from home and RE respondent 2 recognized a resistance from employees to come back daily to the office.

Both RE team and partners agree that remote working is here to stay and is an absolute must to attract talent, but the persona model has not reacted on considering that employees perform individual tasks more comfortably at home than at open work

settings and without hard rules on coming to the office assigned workers might come to the office as often as traveler workers. The employee results are reported in detail on the third section of this chapter.

Almost all RE respondents rated the employees as the top of CRES drivers because their satisfaction is viewed as the mean to deliver value which is why an appealing location should also help the attraction and retention of talent. Respondent 1 believes location selection should also look at a deeper strategic rationale to support other business goals like creation of supply chains or strategic partnerships with innovation and research centers.

The RE team is aware that by putting the employee at first it becomes a challenge to manage the high diversity of cultures inside the organization, which comes naturally because of the global network of the business and the office being in a city that attracts a pool of international talent. The cultural diversity is expressed in terms of national cultures, generational cultures, and business cultures. This challenge is approached by taking in to account the local preferences and not aiming for hard standards which ultimately ends up in giving the power to the managers to have a say in selection of locations and the overall set up of the workplace.

For the RE team the notion that is possible to perform out of the office is an absolute, especially after the COVID-19 pandemic, but they all expressed that collaboration is more valuable in person and when remote working leads to isolation the business strategy can get damaged. The extent to which people come to the office and in what way will they work is left to the managers. There is a goal to move forward with remote working, but standardizations are not seen as a strong value of the strategy as local relevance matters higher so while it should be offered there is no intents to enforce it.

Trends reported by REP also point out that the value of bringing people together is now higher and a review of the office purpose is necessary to prevent damaging the performance and engagement of employees as well as an alignment on the expectations on digital and physical working.

Digitalization has increased the autonomy and requirements of the flexibility of the employees which are not addressed by the current CRES in terms of updating the persona model and consequently the estimation of spatial qualities and requirements.

The negative impacts of remote working are identified accordingly with the ones found in the literature and are left to the managers to push for “empowering teams to manage their time and energy”.

#### 5.1.4. Sustainability

Sustainability is mostly understood in the current vision as a quality related to building certifications, energy consumption, and CO2 footprint. The workplace is given a sustainable environment quality but there is no mention of what this means.

For literature sustainability has a wider definition that involves not only the responsibility towards environmental impacts but also supporting the economic sustainability of the business in terms of production, operation and delivery, and social impacts (Nourse & Roulac, 1993).

This vision is partially shared by respondent 3 in the context of sustainability as part of a future proof company, however it was given in relation to the manufacturing activities which are essential to the company and not to the value production of the human capital.

A CRES supportive of business sustainability requires all RE team members to understand the impacts of RE in the corporate objectives, involvement, and integration with other functional strategies as HR and IT, leadership engagement, successful communication, initiative creation and self-evaluation of the effectiveness of CRES to support the business strategy (Lindholm & Leväinen, 2006).

As per the findings of this research nothing can be reported on the level of engagement with the HR and IT strategies, on the existence of the forementioned indicators, however in theory digitalization impacts on work as a social construction should be assessed in their possible impacts towards the physical space and the business sustainability.

REP do identify as a key challenge for the future to integrate IT tools into people experience and interactions, this is not entirely grounded in PDA documents but the RE team is aware of the importance of such integration.

There is a good understanding of the correlation between the office location and the attraction of talent, however this is also not measured or evaluated which shows that is not a solid part of CRES.

#### 5.1.5. Standardization

PDA documents connect a strong brand identity with a standardization of the workplace in terms of design, ways of working, spaces, and locations. However, RE team respondents agree that such standardization is not practical because of the cultural diversity which makes more relevant tailoring solutions to satisfy specific geographies.

Respondent 2 pointed to the relevancy of a standardization to control costs which is also a goal of the workplace guides.

It is settled among the RE team that the employee preferences will weigh the most on RE choices. The level of autonomy enabled by digitalization backfires directly to standardization attempts as explained in relation to the persona profiling based on 4 standard ways of working which do not fit the preferences of each team and its individuals anymore. Therefore, forecasting accurately the number of facilities and their qualities need updated metrics.

Respondent 2 believes people will inevitably return incrementally to the office and then a problem will come in relation to managing the capacity to prevent saturation, whereas respondent 4 believes the company should slowly move forward to more remote implementations.

### 5.2. Digitalization in the work experience

The test of assumption 2 produced a description of the digitalization trends as perceived by the current vision and contrasted against the employee work experience. The following sections report the digitalization initial concepts results.

### 5.2.1. Autonomy

One of the goals of the vision is to enable employees to make autonomous choices upon their workplace preferences. However, the number of choices and the freedom to choose them are limited because the location of the office is given as well as the physical settings of it, moreover, shared office spaces are always subject to availability or require a to plan a booking.

Autonomy is defined by the vision as a characteristic of individual tasks such as computer work, calls, and management tasks that employees are meant to perform inside their desk neighborhoods with the option to move around different desk settings to suit their collaborative activities. However, there is an agreement between all the respondents that concentration and productivity are at their best at home and remote working or work from home is not addressed by the PDA RE documents as a variable of employee choice freedom in combination with their tasks.

For the vision, the main goal is to enable options and empower the employee to decide where the best place is to work. Enabling options is a task owned by the RE team, and the empowerment is linked in PDA documents to trust and responsibility but also as a managerial task. Both RE and HR respondents agree that there should not be enforced rules on coming or not to the office because setting those rules would remove the autonomy perception and having the freedom to choose is one of the most important things for employees and prospective talent.

Real estate partners recognize as well that workers will continue to seek to own their time and they bring up the topic of permission in the autonomy discussion.

The HR respondent talked about the risk of nonverbal pressure to behave in certain way to not feel judged, guilty, or underperforming towards the assumed expectations.

*“...people are not specifically telling people or forcing people to come to office or telling you have to stay the entire day or forcing you to work for so long, however for some reason there is this immense pressure for me myself as well for also other people on my own team that they feel the need to go to office and stay there a long time because otherwise they feel judged or they feel they are under performing, especially if for example other people on the team or their own manager are excessively going to office you feel pressure non verbally to also go because otherwise you feel you are not meeting expectations. This is a real danger.” (Respondent 5)*

When working from home employees live the autonomy to control their entire work environment and journey. By removing pressures like commuting, social routines, and office etiquette like acceptance of breaks, dressing code, and lunch time, employees feel autonomous to look for their own comfort, navigate freely through the daily agenda and incorporate personal tasks to hours of the day that before were strictly dedicated for work.

Then, the choice to come or not to the office can be based on the planned tasks for the day but also can be a matter of daily mood.

When coding the data, it was found that there is a common confusion between autonomy and flexibility. Codes labeled with autonomy referred to the ability to make your own choices for example:

*“...you are a bit more master of your own time...” (respondent 2)*

*“...it should be available as an option as well as a choice to make”* (respondent 4)

*“it’s very very very important that we are allowed to also do our own thing”* (respondent 8)

However, the quotes came up in direct reference to flexibility discussions as in:

*“We from HR are huge advocates for flexibility making sure that you as an employee can make your own decisions when it comes to flexible working”* (respondent 5)

RE partners pointed to the autonomy as a fundamental part of flexibility of working. But if the main goal is to enable choices and empower employees to take them it should be a conversation about autonomy and permissiveness rather than flexibility which meaning is related to making things adaptable or modifiable.

The PDA documents portray a work experience framed on the amount of time employees spent at the office which is no longer consistent with the level of autonomy gained by working from home, and, while it is of high value among the speakers to keep it, the full implications of the autonomy in the work experience are not known by PDA.

### 5.2.2. Flexibility

PDA documents consider the brand workplace experience to be a flexible environment suitable for hybrid work model, in individual, collaborative and informal spaces. The workplace should also adapt to the different ways that people work (Philips Global brand, 2020). This type of flexibility is initially accounted by the selection of locations with floorplans highly adaptable to what PDA considers ideal workspaces which is an open desk area for the neighborhoods, meeting rooms of diverse sizes, a common area for coffee breaks and small rooms suitable for calls or concentration tasks.

The flexible qualities of the workplace are then set by communicating that eating areas can be also informal meeting places, that collaboration rooms can be suitable for different dynamics such as presentations, meetings, or trainings; open work areas are flexible spaces with desks, furniture and monitors which can be reconfigured.

Respondent 2 mentioned that inside the office flexibility should mean that spaces are easily set up for employees to jump from one task to another without too much time wasted on adaptations and set-ups.

As described in the former section, the CRES frames the space configuration on the defined ways of working in which every employee is meant to fit. However, spaces designed with these constraints now fail to provide a flexible work experience as employees reported constantly jumping from meeting to meeting. The number of digital encounters has significantly increased which translates to saturated phone booths, employees staying home to avoid that hustle, and the open desk setting being questioned as per its functionality. Employees reported experiencing better control of the work setting at home, where they can spend the day jumping thru meetings without being enclosed inside a small phone booth, and easily return to individual tasks in the comfort of their own work setting in terms of a preferred chair, desk, orientation, number of monitors and personal tools and accessories that are forbidden from the shared open desk.

Flexibility in terms of location was also found in the coding. Roles that require working from different locations don't see value in having to commute long distances which is why they value the possibility of online encounters.

Part of the flexibility in the work experience is to have easy access to the office, and this is an agreed priority for all speakers. PDA vision scores the accessibility of potential locations to guarantee that it won't be a problem for employees to reach the office when they need to. For employees a too far or too complicated commuting journey would weight negatively on them staying longer in the company.

Flexibility is also a quality when looking to acquire leases, it is common practice to look for rolling breaks and short-term leases. This is a quality associated with future uncertainty according to the literature (O'Mara, 1999). The extent of uncertainty in the overall business in regard to the locations was not analyzed in this research, however, the CRES aim is to plan for a 5-year scope which is why flexible break options make sense.

There was also found a cultural dimension of flexibility related to the acceptance of the PDA way of working by the local work culture and the adaptability of the employees to the given workplace. Working from home for example is something not perceived as difficult to adapt, all respondents find their home experience more satisfactory and the office experience something that is more like something they must adapt to.

This contrast with the RE team expressing the importance of local relevancies and preferences on the RE choices.

*"...It's not bad where we are though 'cause there's lots of stuff to do outside of the office and because I'm not in everyday it's OK I have a garden like to the right of me right here so if I don't have that at work it's also OK..." (Respondent 8)*

*"...it's nice to be able to you know have the flexibility like to have the pens in the rooms and so on you know... being able to have a place where you can store your notebook and your pen and be able to drop stuff down as you're going and... and I don't know whether that is an old way of working like I'm very happy to be flexible in terms of you know we should write things down on word or whatever or shot them down in our calendar I already don't mind but I just say for me it would be useful to yeah a have a have more dedicated desks..." (Respondent 11)*

To sum up, flexibility steered by digitalization is accountable in the vision by supporting the variety of work preferences, however, this is restrained by the standardized work ways that are no longer representative of how people like to work. The current work experience involves a generalized increase in digital encounters as well as a generalized decrease in office attendance. However, while attending the physical office is not considered critical to perform, the accessibility of its location remains an important feature for all respondents.

### 5.2.3. Remote working

PDA documents refer to working in a hybrid way as the way of working after the COVID-19 restrictions, however the RE team has a knowledge gap on the legal possibilities of this, the facilities that should be provided, and the cultural disparities for adoption.

Employee respondents all reported being familiar with remote working for more than 2 years before the date of this study and they follow their managers advice on how many times a week they should go to the office. In some cases, they have agreed on at least a day when their entire team is meant to meet in person. It is worth mention that PDA global operations are by nature spatially scattered which is why employee respondents were all in a good level of acceptance of remote working.

After the COVID-19 restrictions were lifted, PDA called all the employees to value the together time at the office. The RE team's perception is that person-to-person encounters are kept the most valuable and that bad implementation of remote work could put in risk the strategy. Moving to remote working is something desirable but it won't come from hard rules and is left to the managers to deal with.

REP also reported an increased value on bringing employees together and engaged where IT tools and solutions must look to maximize the working experience whether employees decide to work from home or at the office. Their advice is to align expectations surrounding hybrid work and the purpose of the office. They suggest a scenario in which the workplace provides features not found while working at home, reducing the core space, and operating satellite offices by putting leaders, culture and policies as the enablers of hybrid working.

Employee respondents reported to actively target physical meetings when working at the office and enjoying meeting their colleagues for lunch or after office drinks which are the most common social and together moments. They also highly value the access to a canteen facility as part of the social work experience and to reduce the hustle of either planning to bring food, long waits on nearby lunch places or high prices that they currently experience.

*"I think I finally feel balanced because working from the office is really nice for like relationship, bonding, and being around everyone but from a productivity level it's not the best but when you are at home you can at least be super productive during those days." (Respondent 8)*

It is still recognized that the office is the best place to meet other colleagues and build social bonds, but if other colleagues decide not to come then digital encounters still are the base of interaction. Employees recognize the problem that is being fully booked of hybrid meetings and then spending the day in small phone cubicles at the office, not having meeting rooms available and disrupting other colleagues by having calls in the open workspace. Employees perceive home as a more ideal environment as there is no need to set up or change space to be able to jump from digital meetings to individual tasks, however they struggle in separating work from home, respondents 6, 7 and 11 recognized they often end up working longer when at home.

*"...what actually happened is that us moving working remotely and being scattered across locations, it increased the death by meeting culture, so we are constantly all time, every single day you are in meetings. Someone is like -hey can we call really quick, hey can we call really quick, hey , hey... You try to book your agenda so you can actually go work and someone still puts an invitation at that point. You know like. And very often is calls that could've been solved by email or chat, or if you were in the office you could've just been like -hey can I ask you a quick question..." (Respondent 5)*

PDA strategy puts digitalization as a pillar of the ways of working making it a goal for digital platforms to allow connectivity, simplification, and standardization in employee-

to-employee journeys. Digital encounters have however created some issues. The problematics coming from working on virtual platforms are acknowledged but left to the managers to solve to create a workspace of satisfaction.

Overall employee respondents are at the office 2 to 3 times per week and do not wish to increase the attendance. Respondent 8 perceives there is no real motivation to come to the office besides people which is also the reason respondent 7 gave to attending the office.

### 5.3. The role of the employee

This last section of the results is focused on the employee perceptions of the work experience and its relationship to the office characteristics in contrast with the current and future vision. The perceptions were framed by coding the liked and unliked characteristics of the office and work experience.

Respondent 5 pointed to the current open desk space area as an unliked characteristic mainly because of its size and the desk dimensions that are perceived to be set as a support element of isolation. This is aligned with the PDA guides that aim for the open desk areas to be suitable for individual concentration tasks. However, several respondents spoke of concentration being better at home and mostly joining the office to meet colleagues, which is unsupported by the current desk setting and low availability of meeting rooms.

Open work setting places were also disliked by respondents when referring to performing confidential tasks. Theoretically it should be possible to get an individual room to perform this type of task but because people are constantly on meetings, they are often unavailable, so then the employee in need of performing a confidential task or call will not find a suitable space to perform the task at its best encouraging the employee to stay at home where private space is always available.

The respondents pointed the mix of different styles of desk and booths for working as appealing. All respondents agree that currently they sit in their designated desk neighborhood and the only mobility they have is when they must join a meeting or take lunch. So, for them having standing desks, private screens, and big tables to sit together offers more value.

Respondent 11 mentioned *“I based myself at the desk and then run around and do all sorts of different meetings in the different meeting rooms and I think that’s the... it’s just the nature of working”*. This statement is the perfect example that the workplace transformation needs more than just a spatial renewal because the value and culture of working at the office is still rooted to be based in a desk.

When it comes to the meeting functions of the office respondents do like having other colleagues around at the office and meet them, however the interactions look like more planned status meetings than casual collisions in the open workspace. Respondent 9 qualified negatively the present image of the meeting rooms as a not good representation of the quality of the brand. Respondent 6 recognized that current meeting rooms don’t support the purpose of quick informal meetings.

Respondents 4, 6, 8 and 9 perceived that the following characteristics represent the brand home purpose: (1) Having a canteen, (2) inside homey experience, (3) homey decoration elements, and (4) themed spaces.

Respondents reported that their commuting distance to the office is less than 30 minutes which is a liked quality even when the average attendance to the office is twice a week. Commuting distance is the most weighed quality of the location

The likeability of building typologies differed among the respondents. While a respondent found a vibrant city center appealing others found it too noisy and probably difficult to reach. The stand-alone big building was perceived as a fancy typical office building probably belonging to a hub kind of concept which they found a right match to the brand, whereas for one respondent a smaller older building could carry better the brand concept of home.

To drive the workplace transformation the RE team pointed at keeping updated to the people and how they work to define the spaces, along with them being comfortable and happy. Respondent 1 would like to see RE choices connecting deeper with the business strategy in terms of selecting locations that provide access to strategic resources such as talent and innovation.

The RE team sees no limitation upon people being able to adapt to different circumstances and work settings but the acceptance to live the changes is viewed as a risk. Respondent 1 suggests change management to approach the transformation, respondent 4 believes the organization should steer towards remote working, and respondent 2 sees people coming back more to the office as an inevitable situation. Overall, there is not a strong agreement on whether a change should be steered or not and towards which work model but only respondent 2 acknowledged that RE can change the culture.

The role of the RE department for respondent 2 and 3 should be focused on integration of digital and physical working, for which innovation skills are necessary to build a RE divergent from the traditional one:

*“Past 10 years people (RE) were working on making it more efficient, but how people actually work and collaborate and then match that with real estate is still not I think fully developed”* (Respondent 2)

*“Innovation is key and that’s often technology driven but sometimes also organizational driven, making agreements in teams, when to work, how to work, and so you need different skills than you needed before, and 10 years ago real estate was very much about transaction, portfolio, project management, but nowadays you need different skills I would say”* (Respondent 3)

HR respondent envisions the office as a strategic way to bring people together for which listening to the employees becomes very relevant to be able to provide a workplace that supports diversity.

Respondent employees reported that they are not engaged with RE and are not aware of communications or updates but consider important that there is engagement and opportunities to make initiatives, requests or provide feedback. In addition, employees see that RE has on its plate to support brand engagement thru the space as well as supporting other business strategies such as sustainability goals.

## 6. Discussion

This research project aim is to understand the impacts that digital trends have on CRES and the future of workplaces in PDA. The results of testing the 3 assumptions feed the research sub questions as follows:

### 6.1. The vision of the workplace according to the current CRES

The current vision is that the CRES should put the employee first to successfully enable what they need to produce optimal performance. To do this it is assumed that the employees' tasks and behavior can be defined by 4 ways of working and 4 different types of personas and this ends up being translated to the physical characteristics of the workplace.

This supports theories of employees being at the top of the strategy, however the commitment towards the employee is not showed explicitly in the CRES and comes rather from a hierarchical set of rules and policies that in practice are not actually used. The standardized behaviors guiding the RE choices are part of a set of old assumptions on how people should work and don't reflect what will make employees feel satisfied and happy in the sampled cultural context.

One of the drivers Nourse & Roulac (1993) identified as drivers for property decisions was promoting marketing, sales, and the brand. This was also supported by Škevin (2011) argument on buildings being developed highly around marketing to attract certain tenants or investors.

The outcomes of the research pointed that the perception of a brand in relation to the building that should host it varies among employees and leaders in relation to their own brand interpretation and cultural values which are variable among generations and functions. The value and significance of a physical office and its location are still very strong as symbols of the seriousness of the business and brand value even when people are not willing to work at the office on a daily basis anymore.

Promoting a marketing message is also addressed by literature as a goal of a CRES that is achievable via a careful value-based strategy, however the diversity of functions and cultures in PDA makes it difficult to prioritize any strategy among others to seek the best spatial fit. Centralizing the workplace physical locations is not reactive to the complexity of the current dynamics of the company which include different geographies, operations, and cultures. The associations between both, local and organizational cultures, and the RE choices are present as literature suggested, resulting on a not clear hierarchy of workplace qualities which is not currently talked by the CRES.

Cost is not recognized by the CRES as a strong strategical driver; however, the portfolio status is constantly measured in terms of cost. Highly marketable locations are directly linked to higher costs and forecasting of cost is highly tied to standardizations, this is known by the CRES owners but not grounded in any strategic document.

Targeting cost reductions continues to be a standard in the corporate real estate, and its most practically linked to well established metrics as occupancy costs per square meter and employee. There is little innovation in challenging the cost analysis to evaluate the value production of locations and specific facilities as well as holistic scenarios to understand the real costs of increasing the adoption of remote work practices and other possible scenarios.

Sustainability in the current CRES is narrowed to building certifications and energy topics. The workplace is not tied to the broader concept sustainability, not even from the business perspective, which could potentially risk the business continuity.

Theory pointed the need for RE to become broader in its approach, especially with navigating the effects of digitalization in the “socio-spatial contract”, and this is not found in the current CRES.

## 6.2. Digitalization trends considered in the current CRES

The CRES does not consider the new autonomy of working in its space forecast tools and vision of the workplace shape and behavior. The 4 ways of working and 4 personas are not updated to the new autonomy and flexible qualities of digital working.

The literature on workplaces grounds mostly concepts surrounding its physical qualities, with the most recent references pointing to the need to integrate the technology, place, and people. The connection of this to an increased autonomy is not really explored besides the suggested loss of space dependencies and ongoing replacements. Outcomes of this research show that there is still a space dependency towards the workplace mainly linked to the cultural value of it.

There is much said in the CRES about the employee being able to choose their way of work, but the outcome of this research suggests that that is only possible by working from home and coming to the office now requires the flexibility of employees to adapt to the given facilities. Working from home pushes the office role to the social area which is not reflected in the CRES or the way of work and behavior in the office.

The change in the role of the workplace can be related to the new significances of places grounded in literature which is said to be accepted or not in dependence to the personal choice and tasks. The results of this research point that also is a matter of personal lifestyle and whether people can still enjoy visiting the office, being able to work from home is critical for their retention in the company. Currently CRES is not actively supporting this trend which could represent a risk for HR strategies and goals.

Navigating between being at the office and not, as well as the new ways of interactions, are known to be a challenge which is for now out of the CRES scope and put on the leader’s responsibility to manage their teams in different ways. Literature also recognizes the big responsibility of leadership in technological implementations as well as to cope with the negative impacts of digital working.

Culture can be perceived as too permissive to steer the best practices on digital implementations and makes it difficult to align expectations about ways of working and the use of space which is of great danger according to literature.

Cultures, the ways of working, and workplace choices are deeply connected. Literature recognizes that cultural changes are possible and describes some value perceptions that changed during COVID-19 and with the popularization of digital nomads’ ideals. This multidisciplinary challenge is missing to be fully acknowledged by the CRES.

## 6.3. Is CRES driving the transformation of workplaces?

The overall PDA strategy strives for a digitalization and innovation journey which is not yet grounded on the RE documents or team. PDA expert team is aware of the gaps in

skills and ownership of the issues derived from the digitalization of work, but not all agree in the potential of RE to drive the transformation.

As part of the business sustainability the CRES should align deeply with the digital transformation implications on the workplace.

There is a strong resistance for the RE state to steer a cultural transformation, but the employee interviews showed that in the end they end up adapting their office journeys and that the value proposition and what they expect of the workplace has shifted towards social bonding and flexible spaces. If the OC and CRES do not steer the ways of working, it can compromise the business sustainability and close the doors to innovations that could put the company at a competitive disadvantage against companies that focus on building stronger cultures focused on development of digital skills and supporting the employee autonomy.

Traditional approaches to corporate real estate are missing to fully account the consequences of digitalization of work. While the challenges become clear, there is unclarity towards which discipline should take care of leading a transformation of the “socio-spatial contract” of workplaces. The CRES is vital in this, but as the RE team respondents expressed, it requires a set of skills with a focus on innovation, a better understanding of behaviors, and work processes that for long have been non primordial and even absent from the traditional management of corporate space.

There are opportunities for the CRES to innovate the selection mechanisms. By developing digital adoption, it could be possible to make a model like the one proposed by O'Mara (1999) where the brand message gets a market-oriented location, development gets a location on a tech hub and people are allowed to be physically scattered and digitally connected in a better interface.

Removing the place attachment and the symbolic value of an office location do not seem like near possibilities, but they could become relevant among future generations that strive for lifestyles that allow higher levels of freedom and leisure.

#### 6.4. Recommendations for further research

Further research is needed to gain understanding about what digitalization of work and employee autonomy can produce in a business district scale. PDA CRES has not yet adopted the use of IWMS; however, several innovations are in the market that offer data driven tools to measure behaviors and build a more solid link in between the employees, business strategies, their location and cost. Innovations in this fields could lead to processes of redensification, relocation or sprawl of industries that should be further understood.

Companies with a different focus and size can have a different level of adoption of the digital trends, while the trend has found many supporters it is not clear to what extent smaller companies are able to follow up the future developments around the topic. If digital and remote work prove to better the life of employees, it should not be restricted to certain jobs in certain companies.

This research was limited to the real estate, but the workplace transformation has impacts in other areas of the business which is why is needed a framework that integrates disciplines and brings clarity to the broader impacts of a transformation and how to steer it.

On a global perspective, transnational companies could potentially lobby legislations to support the autonomy of employees, and remote working. Further research is needed to understand the legal restraints and gaps that could put employees on vulnerable positions.

Detaching the place dependency of work can potentially lead to breaking paradigms of the built environment for production and urban development tied to business centers which would call for transition management approaches and the involvement of planners to build a better understanding among the impacted stakeholders.

## 7. Conclusions

### 7.1. Impacts in the CRES and the future of workplaces at PDA

Derived from the answers to the sub questions it can be concluded that digitalization skipped the OC controls and permed directly to the employees, creating a mismatch between the vision of the workplace, how its experienced by its users and the expectations they have towards it.

The brand topic in the workplace which was translated to standardizing the qualities of the designs and aesthetics keeps being a value proposition to the employees especially now that they know that the most productive place to work individual and concentration tasks is at home. Therefore, is supported by this research that employees are on the look to get from an office what they cannot get at home which is a better collaboration experience, social bonds, and brand experience.

Individual and non-personalized desks are outdated to the current work experience and do not add much value anymore. Tasks are now highly digitalized and in consequence require different types of settings and a different type of journey. Open work desks and sitting neighborhoods promote that people sit in the same place and the different settings or a social atmosphere is not something perceived as a permissible option. If the employees are meant to go to the office to be based immobile at a desk (which is impossible to personalize to the most comfortable setting) and isolated, is natural that they will prefer to stay at home where conditions are more comfortable.

Whit a CRES focused on deliver to the employee it is important to take the time to open spaces to learn what they have to say and push for a better culture.

Digital and remote working have created new pressures on employees, some of which are not regulated and left to each company or individual to solve. Global companies struggle at striving for global implementations because of each country's regulations on labor, taxes, business, and culture. Furthermore, the diversity in the value of work among different national cultures and generations makes difficult to steer a CRES supportive of remote working.

If employees build the right support to become autonomous from the office location, they might have a real chance to choose freely where to live without that being a restrain to access a labor market. In other geographies it might even allow social mobility of people living away from the main business areas or city centers which are overall known for having the highest living costs and rent prices.

CRES should increase their awareness of the digitalization possibilities to pursue long term goals to support the real implications of transformations steered by digitalization but also energy transition, housing crisis, and diversity.

In such an uncertain climate, flexibility on leases is most likely to continue as a strategy. It is difficult for CRE to approach conversations in the long term because of the virtual impossibility of forecasting external risks that could impact the business. And this is where coworking spaces have found a business proposition by cutting off the need for long-term investments. What coworking environments do to an OC is uncertain, while colors on the wall are not the most important thing for performance the lack of a strong brand representation does have an impact on the value perception of employees, partners, and prospective talent.

Flexibility targeted to the integration of both work environments (digital and physical) will inevitably lead to increased autonomy which is why is important to acknowledge this in the workplace and cultural transformations.

Autonomy should be the focus of discussion on the future of workplaces and their reconstruction. To call working from home a flexible practice has a semantic implication of something that the company is willing to accept and leaves out the real discussion of evolution of work towards autonomy and the new cultural life values of younger generations which no longer take professional success as the central goal of a lifetime.

## 7.2. Recommendations

This summer the Dutch parliament approved legislation to force employers to consider employee requests to work from home if the profession allows it (Baazil & Fernandez Cras, 2022) which is a huge legitimizer of autonomous performance and should be a stronger call to review CRES and the future of work.

Updating activity-based models and ditching the standardization of desks can provoke a shift of behavior but if it is not approached from a broader cultural transformation of the ways of working it will cause confusion, resistance, and dissatisfaction. If employees are not aware of, how are they expected to perform and behave in the office and remotely their behavior will be scattered on to the personal beliefs of the expectations. An explicit commitment of the CRES to the employee is needed in relation to the given autonomy, and the purpose of the office and flexible work.

There is an opportunity for the implementation of data tools to provide a better understanding of the employee geographies in relation with their strategic goals to transform the value of physical locations and benefit from scattered locations and digital connection.

It is debatable the level of involvement the RE professionals should have for the future. The organization points at managers to steer behaviors and the digital adaptation, however the setting of the tools and spaces is in hands of IT and RE. Some of the RE team members acknowledge that the profession has long focused on the technicalities of RE but that the current panorama strives to incorporate new skills to bring innovation and fill the gaps other professionals are not taking care of.

Changing to a broader and holistic view of corporate real estate could be an ideal opportunity to push the market to challenge the real estate locks and develop circular practices.

### 7.3. Reflections

The scope of the research question contributed to update the CRES interests and question the validity of a business model that aims to support employees without their active participation in the processes. The impact of the cultural dimensions was highlighted as planned by incorporating the employee experiences. However, increasing the cohesion in improving the building stock and development was not so well achieved as the interest and incentives were not saturated enough to determine who drives the trends.

The potential of place reconstruction was only grounded as per the possibility of innovation and of the RE becoming broader, it is possible that by means of a different strategy for data collection divergent thoughts could have been grounded. Some assumptions of the office as a workplace were explored as well as the impacts of remote working in the view of employees.

With most of the aims achieved, the selected methodology proves to have been successful, however, the research would have been richer with a bigger sample of respondents to cover more cultural perspectives to address the transnational component of the company.

Finally, this research was successful to weave the concepts of digitalization, real estate, and culture which are needed to continue to disclose the potential of workplace transformations.

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