

**UNIVERSITY OF NAPLES  
FEDERICO II**



**DEPARTMENT OF ECONOMICS, MANAGEMENT,  
INSTITUTIONS**

**PH. D. COURSE IN  
MANAGEMENT  
XXXII CYCLE**

**“New technologies supporting operations: “Smart Working as  
a tool to shape processes and human resources practices in  
public sector”**

**DOCTORAL THESIS  
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**ACADEMIC YEAR 2018-2019**

**“New technologies supporting operations:  
Smart Working as a tool to shape processes and human resources practices in  
public sector”**

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## **Introduction**

In recent decades technological innovation is a phenomenon that has involved in public and private organizations, causing real organizational change revolutions (Fiorentino, 2013; Bekkers and Homburg, 2005). Organizational change is represented from a dynamic point of view as a process that, in the course of its evolution, which aims to counter organizational inertia and resistance to change itself. The goal is to make organizations adhering to changes coming from society by making it more efficient and productive. (Consiglio, 2007; Rebora and Minelli, 2007). In a context of rapid change, the pervasiveness of digital technologies in all sectors of human activities models a critical challenge to organizational thinking: knowing how to understand the significant changes taking place, recognizing that the area of technological choices and the area of organizational choices, they do not constitute conceptually separate worlds but are interconnected part of organizational change (Venier, 2017).

In an organizational change perspective, in addition to the traditional organizational solutions, designed to pursue efficiency objectives, in which the typical vertical connections, such as hierarchy, rules, formal information systems, technologies supports more "modern" organizational forms based on concepts of horizontal communication and coordination, associated with learning, innovation and flexibility objectives.

One of these "modern" organizational forms takes the name of Smart Working. in which flexibility, autonomy, and technological innovation cross to provide new solutions that adhere to contemporary reality.

According to many researchers (e.g. El Gamry et al. 2018, Ballistreri, 2016, Gastaldi et al.2014) Smart Working is defined as how an organizational approach combines flexibility, autonomy, collaboration, and digitalization with the aims to achieve greater efficiency and effectiveness in the organizations.

The following research work is divided into three chapters. The first chapter initially addresses the topic of organizational change. In detail, the topic of organizational change in the public sector is addressed through a systematic analysis of the literature. In the final paragraph, the topic of organizational change in the public sector is outlined through the seven critical factors proposed by Fernandez and Rainey (2006) identified for a valid path of change in public administrations. Among the factors analyzed are some that are particularly significant in the experience of organizational change: the role of public management, the topic of organizational planning, and the managing of the economic, human, and technological resources of a public organization.

The three factors are closely related to each other: public management must set itself the ambitious goal of imagining real change management projects. Also, competent public leadership must be able to identify the gap between necessary and available skills within the organization in order to design an individual and collective development path (Decastri, 2018; Mercurio and Martinez, 2009).

The second chapter illustrates how digital transformation and technological tools have had a significant impact on organizational change processes in the public sector. In this context, the role that the different actors play in redefining organizational spaces and responding to the needs of society is particularly important. New generation technologies represent a fundamental tool in the hands of organizational subjects to redefine organizational spaces and respond to the needs coming from society. After a brief theoretical study on the relationship between organizations, technologies, and individuals in organizations, the final part of the following chapter intends, however, to deepen how technologies are leading to the spread of new organizational models in the public sector, among them, Smart Working.

As previously described, Smart Working is a new organizational model in which the mode of work's execution of the employment is characterized by the absence of hourly or spatial limitations (Sarti and Torre, 2017; Gastaldi et al. 2014). Work is organized according to phases and for goals established with an agreement between employees and managers. The aim is to support public workers' work-life balance and, at the same time, to encourage the growth of work's efficiency.

Smart Working emphasizes organizational flexibility, on the voluntariness of the parties that sign the individual agreement and on the use of instruments that allow remote working (such as laptops, tablets, and smartphones). Smart workers are guaranteed equal economic and regulatory treatment compared to their colleagues who perform the service in ordinary ways. The last two sections define the

constituent elements of Smart Working and the methods of diffusion and development in the public sector.

The third and final chapter analyses the diffusion of Smart Working in the Italian public administration. The empirical part was conducted using a qualitative methodology. According to many researchers (Cassell and Symon 2006; Denzin and Lincoln (2002, 1995) a qualitative research studies social phenomenon to describe and to understand the reality. In this research work was been realized a series of semi-structured interviews to civil servants and public managers of local and decentralised public administrations. The aim was been tried to understand the perception that civil servants and public managers have concerning the diffusion of the Smart Working model in public administration. In detail, an attempt was made to understand positive and negative aspects concerning three central elements of an effective diffusion of Smart Working: the use and diffusion of new technologies, the development of a trust-based organizational model, the effective implementation of the work-life balance for civil servants.



# **CHAPTER I**

## **“CHANGIN THE PUBLIC SECTOR”: A SYSTEMATIC LITERATURE REVIEW**

### **1.1 Introduction**

The following chapter has a dual purpose: on the one hand, it intends to provide a theoretical introduction to the concept of organizational change, identifying its constitutive factors, the organizational topics, and the main methods of implementation.

On the other hand, starting from this overview on the topic of organizational change, we want to investigate one of the issues most frequently addressed in recent decades concerning the methods of change in public administration. The topic is widely debated in organizational studies for the complex role that public administrations hold in many ways: providing services to citizens, supporting national and global economies, supporting effective regulatory action. The following chapter intends to deepen this theme through a systematic review of the literature.

In the analysis of the review of the literature relating to the processes of change in the public sector, it was possible to dwell on two relevant factors in the transformation of public organizations and which will be afterward analysed in the following chapters.

Firstly, the role of management in organizational changes (Kotter 1995, 1990): the responsibilities of public managers have changed enormously, just as it has

become necessary to adapt the style of leadership by public managers that can no longer be based on the control of the presence and respect of the rules, but on the trust and responsibility in the achievement of results by employees. Secondly, the role of new technologies in supporting managerial actions in creating the conditions for the digitization of public organizations (Stoker, 2006). The theme of change in public organizations has become increasingly important at the same time as the digitization and globalization of contemporary societies, in which the methods to carry out the professional activity and provide services to citizens have profoundly changed.

In the analysis of the literature review, it has been possible to identify some relevant authors (e.g., Battaglio et al., 2009; Brunsson et al.2000) that interpretative the topic of organizational changes in the public sector.

Among these are Fernandez and Rainey (2006), whose systematization work has been fundamental in defining the factors that can lead to an effective consolidation of organizational change in the public sector. Starting from their research work, in the final part of the following chapter, it was possible to systematize the activity of analysis of the research work on the topic in question.

Among the factors proposed by Fernandez and Rainey (2006), one of the most analyzed concerns the need to find resources that generate and consolidate organizational change. Among these, over the last few years, particular attention has been given precisely to digital tools, capable of generating operational autonomy in public employees and more exceptional ability to manage its

activities with a consequent increase in performance, motivation, and the possibility of integrating effectively professional life and private life (Dweck, 1999).

The role of the manager in this perspective is oriented to delegate and empower people by defining the priorities and objectives in a collaborative way to be reached from the point of view of a good relationship between technology and worker that will be highlighted in the following chapters when we proceed to identify those organizational models where the relationships between individuals, technologies, and organizations are significant.

## **1.2 The impact of change on organizations: An overview of the constitutive features**

The topic of organizational change has been one of the main issues under debate in organizational studies. (Van Maanen and Barley 1985; Bartunek and Moch 1987; Bennis 1969, 1966; Grundy 1993)

Given the complexity of the phenomenon, it has been analysed by numerous disciplines in an attempt to develop a definitive framework that combines the individual and organizational aspects that are intertwined in the change process. According to several researchers (Lewin, 1951; Mercurio et al., 2000; Quaglino 1987; Schein, 1985; 1990), organizational change is a voluntary and collaborative process in organizations to define an evolution from a present state in a given time to a future state. This process of change usually occurs following the

disclosure of a discrepancy or error in a critical situation that is intended to be addressed to restore adequate performance in the organization. On the topic of organizational change, it is possible to identify the following additional definitions that highlight general aspects of change from a managerial point of view.

- *"Voluntary and collaborative process aimed at solving a problem or, in general, useful for planning to obtain a better functioning of the organization."* (Bennis, 1972).
- *"A change in the roles' relationships and, therefore, also in the duties and personal relationships of those who perform them."* (Rice, 1974).
- *"A state of transition between a current (unwanted) and a future state, towards which the organization is directed."* (Cummings and House, 1985).

With this in mind, it is necessary to frame the phenomenon of organizational change as characterized by a plurality of interconnected dimensions. According to Burke (2010) and Mercurio et al. (2000), it is possible to recognize four relevant factors when analysing organizational change: i) *the object of the organizational change*, ii) *the content of the change*, iii) *the force for organizational change*, and iv) *the processes and strategies used to implement organizational change*.

- i) **The object of the change:** Regarding the description of the object of the change, in organizational studies, a plurality of organizational actors has been identified that can be invested in the transformative actions. The micro level of analysis is that of the individual who works within the organization. Many

studies have analysed how the individual is central to achieving the goals of change. (Aguinis et al. 2009; Coyle-Shapiro et al. 2007, Bateman et al. 1993). In an organizational structure in transformation, the individual's character plays a central role in the implementation phase of the change process as well as in the phase of resistance to the pushes to transform an organization. The second level of analysis concerns the group whose function assumes primary importance when the change concerns a selective company function or part of the organizational structure. The third and fourth levels of analysis of the object of change concern the company and the network. As far as the company level is concerned, the analysis focuses on the changes that affect organizational units. Instead, when we refer to the network level, we analyse the role that firms have as promoters or receptors of change and how the balances change under the productive and relational aspects.

- ii) **The content of the change:** In addition to the theoretical aspects concerning the object of the organizational change, another feature that is subject to analysis is that of the different degrees of intensity that characterize change within organizations. According to Weick and Quinn (1999), it is possible to distinguish changes as episodic or continuous. Episodic or so-called discontinuous change can be caused by internal events such as personnel rotation, the insertion of new people within the organization, or events external to the organization such as technological changes (Grundy, 1993) or legislative reforms (Brunsson et al.2000). These changes usually result in a strong impact on the organization. This approach has the advantage of being

defined by a predefined time. There are different interpretations of the effects of this approach. According to some researchers, this approach is seen as advantageous from an economic point of view; however, according to other authors (Taylor and Hirst, 2001), the narrow temporal scope represents a significant limit to the change being detectable over time. With the concept of continuous change, on the other hand, the ability of organizations to constantly change to keep up with the rapid evolution of their social and economic contexts is highlighted. According to this approach, organizations face small and continuous processes of change that bring about lasting changes in organizations as well as making organizations capable of proactively responding to challenges arising from the internal and external contexts.

- iii) **The force for organizational change:** As previously described, change brings together individual and structural aspects that affect how organizations deal with change. Therefore, to trigger a process of change in an organization, thrusts that direct and influence change are invaluable. According to several authors (Verhoest et al. 2007; Daft and Noe, 2001; De Vries et al., 1986), it is possible to identify three different pushes for change. There are external forces that are common to all organizations and that can be generalized at the macro level such as, for example, new technologies, social and political pressures, and changes in the labour market. The second type of push for change is identifiable in those that are defined as internal thrusts, referring to single organizational experiences and concerning the responses that managers

and workers give to internal organizational problems. The internal thrusts to change also represent a particular moment of response to the changes that are evident at a relational and group level. (e.g., leadership, motivation). (Boonstra et al. 1998; Walton et al.1985; Wallach et al.1983).

Finally, the third type of push for organizational change is at the individual level and it is linked to the micro-level organizational context and concerns the needs that individual subjects have to trigger a process of change (Pettigrew et al.2001; Argyris and Schön, 1978, 1974).

iv) **The processes and strategies used to implement organizational change:**

In the analysis of the processes of change that are brought into being within organizations, it is essential to understand what the objects of change are. According to many researchers (Cameron and Quinn. 2005; Fuqua et al. 1993; Nadler, 1981); it is possible to identify three objects of change that can be framed in this way: A change in the organizational structure takes place to tangibly implement an immediate intervention to transform the organization. Very often this happens thanks to the actions of the promoters of change (e.g. management) and it can also have a symbolic communicative role. A change in work processes and the work environment concerns the way in which – and the places where – people work. The actors of these changes are external subjects who exert a strong influence on the organization, and the top managers who prepare programmes aimed at improving the quality of life of workers and the results of work processes through strategic and operational plans, the re-engineering of workflows and the modernization of work tools.

Cultural change refers to changes in the values, attitudes, norms, behaviours and beliefs of organizational subjects: Implementing this type of change means intervening in the thoughts and perceptions of employees and, consequently, of the entire corporate culture.

### **1.3 The methods of implementing organizational change**

Many researchers have tried to understand how organizational changes come about in organizations. According to Luecke (2003); Bennis (1969, 1966), Hatch (1997), one way is to proceed to a planned or otherwise unplanned change path. This type of change, to be defined as such, must essentially be the result of accurate planning and design and must be characterized by a shared will and an ongoing relationship of collaboration between the parties involved. The planned change involves a design effort on the part of the change-implementing parties to bridge the current state of discontinuity that exists between the actual state in which the organization is located and the desired state that the organization itself aspires to reach. This gap can concern both a concrete problem (relational, structural aspects) that can be constituted by a real problem, or by an attempt by the organization to tend towards an ideal organizational structure. Not all the processes of change, however, are the result of the will of the organizational subjects: Unplanned changes or those that spontaneously occur due to external or internal situations cannot be foreseen in any way. In this case, the organization must be able to reduce the negative consequences and try to make it possible to implement benefits in the organization from an adaptive perspective (Piccardo et al., 2007, Bordia et al. 2004).



Other types of organizational change implementation can be divided into incremental or radical implementations.

Radical change is an organizational experience in response to particularly critical situations that pushes an organization to move from its starting state to a completely different one. The drastic nature of these changes subjects the organization to high resistance and creates many margins of uncertainty (Burnes 2009; De Vries et al. 1986).

The mode of incremental change implementation instead takes place in an evolutionary and non-drastic manner through the introduction of new production processes, managerial systems and technologies (Brown et al. 2012; Hesselbein and Goldsmith 2009; Lau et al. 2004). This type of change finds its initial thrust in the analysis of the existing situation, whereby the weaknesses and the possible areas for improvement are identified, and plans are developed for the realization of actions aimed at correcting the inefficiencies encountered and for achieving new potential for the organization. Incremental change is often dictated by the paradigm of continuous improvement, which is a small change to parts of – and the processes of – the organization that, overall, can be the components of a possible revolutionary change. The preponderance of incremental changes compared to revolutionary changes is due to the "philosophy" with which most organizations approach change: not as an improvised event, but as a path implemented to manage changes in the external context in which the organization is inserted or to anticipate particularly innovative competitors' moves by respecting the times and the individuals within an organization.

Organizations that manage change according to this perspective safeguard their mission by improving their processes and, at the same time, achieving the constant maintenance of their vision.

As previously defined, respect for individuals within organizations is fundamental in the mode of incremental change. In fact, the managers implementing the change using this attitude towards other individuals find their own legitimacy. According to Kreitner and Kinicki (2004), organizational change can be defined through the presence of four variables: i) the different degrees of corporate complexity, ii) the costs to which the company is subjected, iii) the uncertainties affecting the employees of companies that change their structure, and iv) the presence of internal and external resistances.

Finally, organizational changes can be divided into three different types. There may be first-degree changes related to incremental routine changes, changes defined as second degree, which involve substantial changes to the shared interpretative schemes, as in the case in which the implementation of a new strategic vision occurs, and finally, third-degree changes, in which we witness the profound alteration or substitution of shared interpretative schemes (Meyer et al. 1993; Bartunek and Moch 1987).

Another relevant method to analyse is the one proposed by Lewin (1951). Lewin starts from the assumption that the phenomenon of change is a temporary situation within organizations that must be governed and alternated with stability in the life of an organization.

Lewin identifies three levels of the organizational change process:

- I. **Unfreezing:** In this phase, the internal needs of an organization and the opportunities offered by the change are identified as possible

changes in the external context of reference. Anyone who is responsible for the organization will have to "activate" the alert level and develop a sense of urgency in abandoning old paradigms, weakening possible resistance (Lawrence, 1954).

- II. **Phase of change in the organization:** This second phase represents the heart of the action of change, in which the direction that the unbalanced system will take in all its aspects (actors, tasks, structures, technologies of the organization) is outlined. There is a need for the identification of figures who develop and support the change that can occur with the development of new learning methods and processes oriented towards new attitudes and behaviours. Furthermore, the assimilation of the processes of change in individuals must be facilitated through support levers such as, for example, training.
- III. **Refreezing:** Once the organizational changes have been concluded, it is necessary that the processes that consolidate the change describe the new organizational culture. This phase of consolidation of organizational change strengthens the changes that have occurred and establishes the transition to a new organizational routine balance.

#### **1.4 Organizational change strategies: A challenge for organization**

One of the main issues addressed by organizational researchers when describing the processes of change concerns the possibility of completing the set objectives.

To this end, it is essential for those who intend to govern the processes of change to identify what may be the best strategy based on the type of change that is intended to be carried out and the relationship that exists with the external and internal environment. The main approaches that can be followed to start an organizational transformation process can be identified in four main models: *i) a collaborative approach, ii) a negotiating approach, iii) an emotional approach, and iv) a coercive approach.*

- i. **Collaborative approach:** This type of approach to the implementation of organizational change processes aims to make it through the entire change with the collaboration and involvement of the actors in the process itself. One of the critical points that is brought to the attention of organizational researchers concerns the intensity of this collaborative approach. Often, this approach is implemented in situations where the objectives are already set and where the contribution made by collaboration is exclusively limited to implementing improvements in those changes that have already been structured by the management (Quinn, 1978; Beckhard and Harris, 1977). Developing a collaborative approach when implementing organizational change has four advantages. The first involves reducing the resistance to change that usually occurs within organizations. This is determined by the openness to change that mitigates the anxieties and fears of the other organizational actors involved in the change. The fear of the unknown and the failure of a change that is to be implemented in an organization are closely connected: In not knowing what will happen, or if it will be possible to face it, it helps to oppose any transformation. Individuals build a barrier to protect balance or immobility, imagining that they

have achieved a degree of satisfaction that does not allow for other transformations. The second advantage of using a collaborative approach to change is that of reducing external resistances, given that this approach can be seen as an attempt at a democratic implementation of organizational processes. The third possible advantage is that of being able to exploit the abilities of the actors who are part of the organizational structure. The fourth advantage, finally, can be identified in a strengthening of the organization in response to the thrusts coming from the outside.

- ii. **Negotiating approach:** This approach is based on the implementation of consultation, bargaining and negotiation processes in organizations such as exchange levers. This approach is based on the assumption that change inevitably involves a conflict between organizational actors. The advantages of using this approach can be varied. In the first place, it can lead to a reduction in internal resistance through offering organizational legitimacy to the organizational actors involved in the change process. Furthermore, the negotiation softens resistance because the promoters of the change have the possibility of reviewing their organizational choices. A second advantage of this approach to the implementation of organizational change concerns the possibility of reducing external criticism. Obtaining consent from all parties involved or affected by the change process is positively assessed by the stakeholders. However, implementing this approach requires some fundamental conditions for its concrete implementation. On the one hand, there is a need for sufficient time to start negotiations that can lead to a compromise on the changes to be

implemented. The second condition is for those who implement organizational change (e.g. management) to question their ideas, strategies and objectives. Finally, a third condition is the ability to recognize a conditioning power and an interdiction of power in another group within the organization that is subject to the change or in other organizational actors.

- iii. **Emotional approach:** This type of approach to implementing organizational change relies on fideistic and visionary tools. The actuators of change, rather than acting on rational factors, base their transformation project on ideological motivations. The use of an emotional approach is present above all in some innovative companies that are based on the charismatic power of a manager or a group that promotes change. In order to actually realize an emotional approach, a strong cultural homogeneity is required as well as the absence of strong and differentiated subcultures in the organizational structure. One of the critical issues relates to organizational actors tending to idealize the qualities of those who hold managerial or leader positions. (House, 1988; Martin and Siehl 1983; Hofstede 1980;) In some cases, this idealization takes place against an event from the past. The leader is invested with an extremely difficult role and the group's dependence on him or her is full of expectations that often risk not being realized.
- iv. **Coercive approach:** This approach to change implementation within organizations is based on the need, especially in emergency situations, to intervene with a top-down approach for the realization of imagined organizational transformations, inducing individual organizational actors to change their behaviour and respect for power. The coercive approach, in certain

situations, can gain consensus because it is based on decisive and resolute management attitudes that are not up for compromise in terms of the modification of change objectives. Another critical topic involves dealing with problematic situations in cases of change. In the group setting, a sort of collective fantasy develops where the group expects that a figure or an event will be able to face and resolve the condition of crisis. This reaction represents an element of cohesion within the group as opposed to external and internal criticalities. On the topic of the coercive approach, in a public administration – the central subject in this study –, any attempt to increase the control over and the reliability of the behaviour of its officials' risks exerting excessive pressures, thus creating an environment that is impermeable to change. The relative resistance to change is not an unexpected consequence (Crozier, 1964).

### **1.5 Managing organizational change in the public sector: A literature review**

As highlighted previously, with the concept of organizational change it is possible to identify the process of transformation that sees individuals, events and actions move over time in a given context to improve the functioning of an organization and to increase its effectiveness and efficiency.

With this as the starting point, the subject of change in public organizations has assumed particular relevance in the managerial debate for the role it takes from a social, economic and institutional point of view (Esposito et al., 2018; Pollitt, 2011, 2009; Ferlie et al., 2007; Pettigrew, 2005, Pettigrew et al., 2001, Pollitt and Bouckaert, 2002; Parker and

Bradley 2000; Perry et al.2010). This managerial and theoretical debate has proved increasingly relevant in recent years due to the intense changes that contemporary societies are challenging, in which the meaning of organizational change is associated with two strands of research: one that identifies new resources and skills for increasing the capacity of public organizations to generate value and for increasing stakeholder returns (Beer, 1980; Porras and Silvers 1991; Stuart, 1998), with the second strand identifying new processes and models for organizational change in public organizations (Grady and Grady III., 2013; Clark and al. 2010; Higgs and Rowland, 2010).

To investigate and explain the existing situation in the academic debate, the systematic review of the literature for this study is organized around some critical issues found in previous literature reviews.

### **1.5.1 Research method**

To implement a systematic review of the literature on the topic of organizational change in the public sector, a recognized and accepted guideline was identified to obtain a series of consistent data in terms of relevance, accuracy, and depth of the research topic discussed following. (Denyer and Tranfield, 2008; Galvan, 2006; Tranfield et al., 2003; Pettigrew, 1997).

First, a plan was developed for the systematic review of the literature in relation to the objectives of the research. The objective was achieved by defining the elements that are useful for a detailed description of the subject being analysed: i) the choice of a targeted



data set, ii) the definition of keywords and criteria for the inclusion or exclusion of contributions in this research, and iii) a data set analysis tool.

Regarding the first point on the analysis of the literature, the Institute of Scientific Information Web of Knowledge (ISI - Thomson Reuters search engine) was used as it contains the most influential publications and journals related to management disciplines.

The field of research was limited to contributions in English, as this allows for a more correct analysis of the research topic. The decision to use only the base collection was taken in an attempt to allow for an impact search from which we could draw clear implications and observe the useful indications for future research on the subject.

The data search was carried out in two phases: at the beginning of September 2018 and at the end of September 2019. For the first year of availability for the data set on this research topic, 1990 was adopted as the starting year with a time span of almost 30 years (from 1990 to 2018 and from 1990 to 2019). This decision to analyse such a long period was made in order to understand how the issue of organizational change in the public sector has been analysed and with what intensity over these 30 years.

Regarding the second phase, for the research activity, appropriate keywords were identified for the research topic in an attempt to grasp the full extent of the phenomenon rather than merely examining a single case of innovation/change. The following keywords were combined in the search engine: *"public administration"*, *"public sector"* and *"public government"*, with those related to the specific organizational process *"change management"* and *"reform"* to get to the final data set analysed in this work. In this phase, 1650 articles were selected for the review activities. To get the broadest

possible view on the topic of organizational change in the public sector, the following categories have been indicated for article search: "*management*", "*public administration*" "*business*" and "*law*".

In this second phase, once the implementation of the data set was defined, a screening phase was carried out. This screening activities based on two factors: *i) the relevance of the contribution; ii) the coherence and consistency of the contribution.*

- i) **Relevance:** The analysis was carried out by checking the contributions' titles present in the data set with the exclusion of duplicates and incomplete documents. After this first phase of qualification analysis, a relevant core of contributions in the data set was removed, as these contributions were found to be unrelated to the processes of change in the public context.
- ii) **Coherence and consistency:** The second phase of the remaining textual analysis was carried out through an in-depth reading of the abstracts and, in case of doubt, of the complete texts, in order to determine whether the contributions were relevant or not for the objectives of the literature review on the topic of organizational change in public organizations. In detail, an attempt was made to verify whether the texts concerning specific or local cases had general implications capable of providing theoretical and managerial implications consistent with the research work (Galvan, 2006).

Finally, a further screening phase was undertaken for the academic contributions so that only articles were selected for analysis, eliminating reviews and proceedings. The final data set consisted of 447 relevant articles.

The final data set of articles represents a critical starting point for defining our research topic. To analyse the current situation in the academic debate, this systematic review of the literature was carried out using “*bibliometrix*”. Bibliometrix is an open source tool that can be used in quantitative research to realize all the main methods of bibliometric analysis (Aria and Cuccurullo, 2017).

### 1.5.2 Results

Before an in-depth analysis was undertaken on all the collected data, a general overview was carried out (see Table 1.1)

Table 1.1

*Overview of the Data*

<i>Description</i>	<i>Results</i>
<i>Documents</i>	<i>479</i>
<i>Sources</i>	<i>90</i>
<i>Keywords Plus</i>	<i>724</i>
<i>Author's Keywords</i>	<i>918</i>
<i>Period</i>	<i>1992-2019</i>
<i>Average citations per documents</i>	<i>19.51</i>
<i>Authors</i>	<i>774</i>
<i>Author Appearences</i>	<i>904</i>
<i>Authors of single-authored documents</i>	<i>192</i>
<i>Authors of multi-authored documents</i>	<i>582</i>

<i>Single-authored documents</i>	<i>207</i>
<i>Documents per Author</i>	<i>0.619</i>
<i>Authors per Document</i>	<i>1.62</i>
<i>Co-Authors per Documents</i>	<i>1.89</i>
<i>Collaboration Index</i>	<i>2.14</i>

Starting with the analysis of this data set, there is a relevant concentration of article contributions on public sector organizational change between 2005 and 2019.

This aspect is relevant to understand how the topic of organizational change in public administration is central in academic debates. In the period under consideration for the analysis of scientific documentation on organizational change, the annual growth rate is 7.47%.

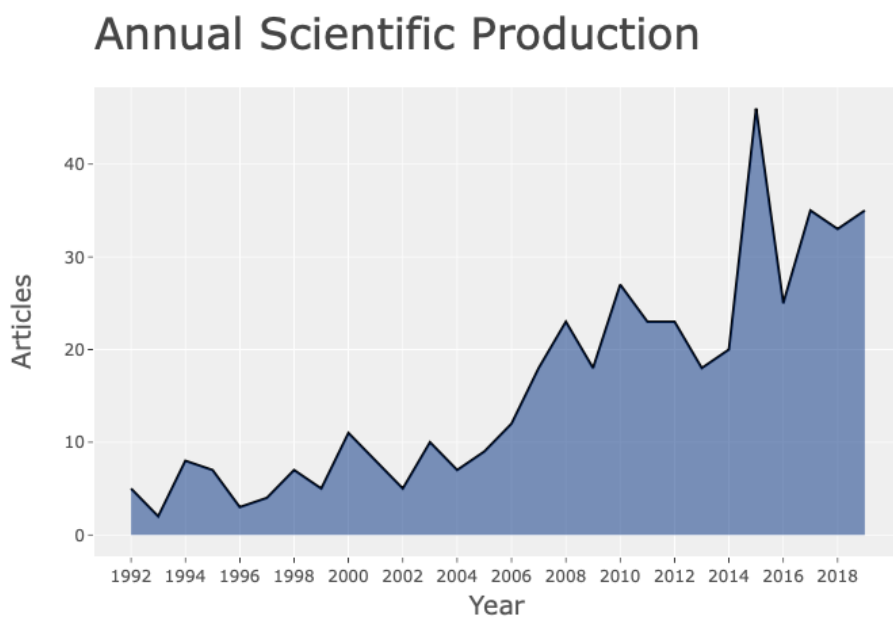


Figure 1.1: The literature review results on change management in the public sector by year of publication. Source: *bibliometrix*.

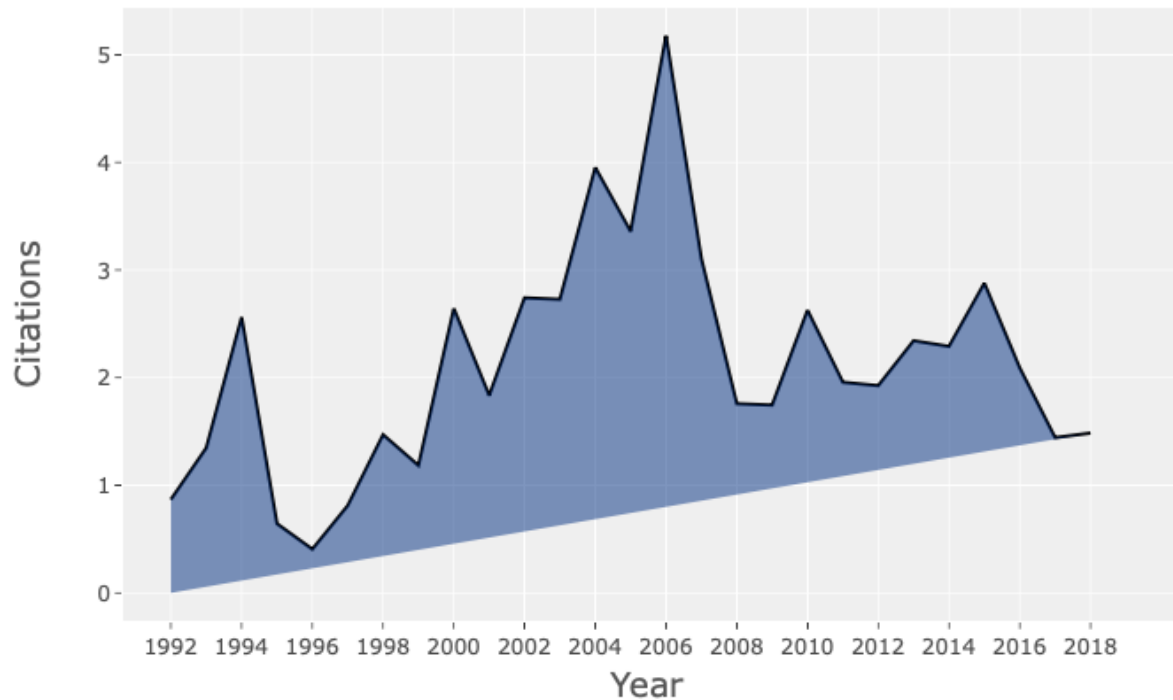


Figure 1.2: Average article citations per year. Source: *bibliometrix*.

The contributions for the data set that was analysed were published in 20 different scientific journals. The majority of the articles were published in public administration journals such as *The International Review of Administrative Sciences* (46), *Public Administration* (37), *The Public Management Review* (32), *The Public Administration Review* (31) and *Public Administration and Development* (29)

Table 1.2

*Most Relevant Sources on Change Management in the Public Sector*

<i>Sources</i>	<i>Number of Articles</i>
<i>International Review of Administrative Sciences</i>	46

<i>Public Administration</i>	37
<i>Public Management Review</i>	32
<i>Public Administration Review</i>	31
<i>Public Administration and Development</i>	29

When examining the geographical context of the study for the public sector, it is possible to verify how the most consistent literature on the subject of organizational change in the public sector comes from the American and Anglo-centric perspectives.

Table 1.3

*Scientific Production on the Topic of Organizational Change by Country*

<b><i>Country</i></b>	<b><i>Frequency</i></b>
USA	132
UK	87
AUSTRALIA	62
ITALY	45
NETHERLANDS	30

These data highlight an interesting point regarding the literature. The Anglo-Saxon context and the institutional reform systems in this geographic area have mainly impacted the dynamics of the research on the topic. In detail, it is possible to verify how the Anglo-Saxon context has impacted the European research context in terms of identifying factors for managing change in the public sector.

Another aspect that emphasizes how the issue of organizational change in the public sector has become increasingly central in the academic debate in organizational studies is the dynamic development of the words used over the years by researchers on this topic.

Figure 1.2 highlights how, for example, starting in the 2000s, we see impressive growth in words such as "*reform*", "*performance*" and, above all, "*management*". This underlines how the topic of organizational change has developed as a branch of particular interest, which is that of managing change phenomena in the public sector.

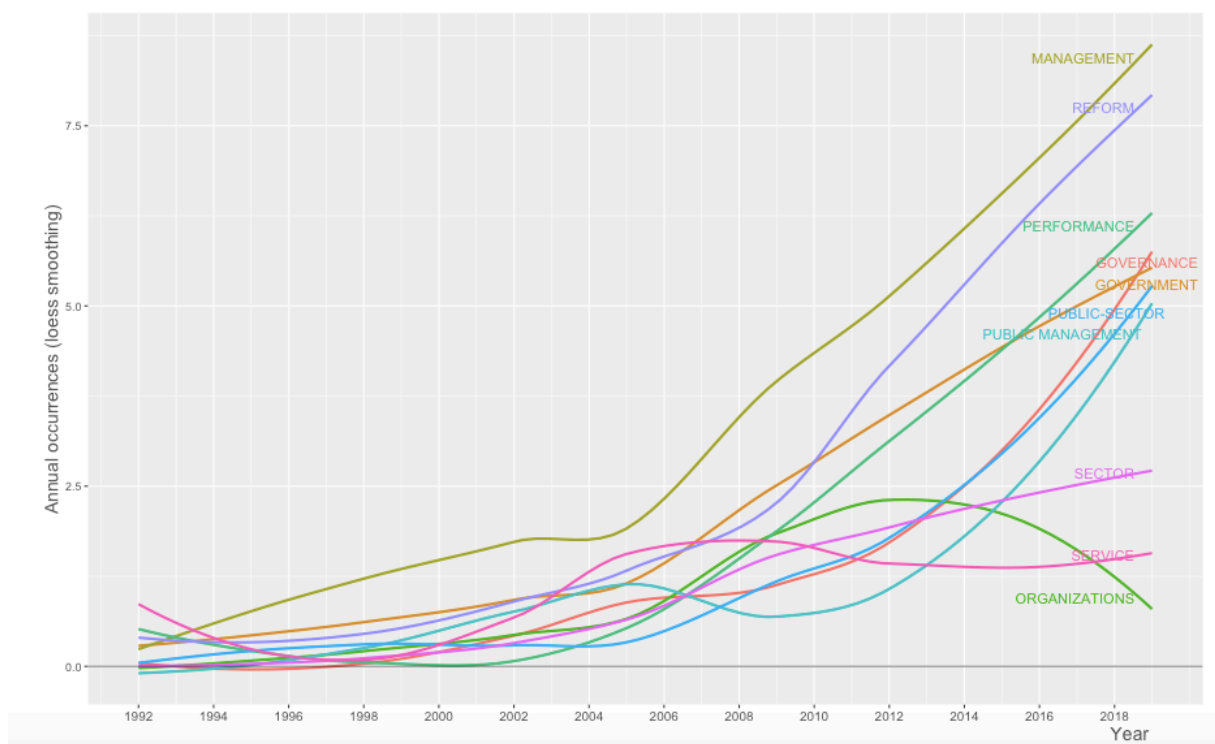


Figure 1.3: Word dynamics in the literature review on the public sector. Source:

*bibliometrix.*

Another particularly interesting aspect in the analysis proposed in this review of the literature is the identification of the keywords that the authors consider to be particularly relevant and that mostly reflect the issue of organizational change in the public sector.

Among the top-five most-cited phrases in the texts, abstracts and references are "*public administration reform*", "*public administration*", "*new public management*", "*change management*" and "*organizational change*".

"New public management" is among the phrases most used in the authors' texts dealing with the issues of organizational change in the public sector demonstrates how this line of research has been particularly relevant both from a theoretical and practical point of view.

In detail, what is particularly interesting is the analysis of the five most-cited articles' literature references for the other articles on the topic of organizational change in the public sector.

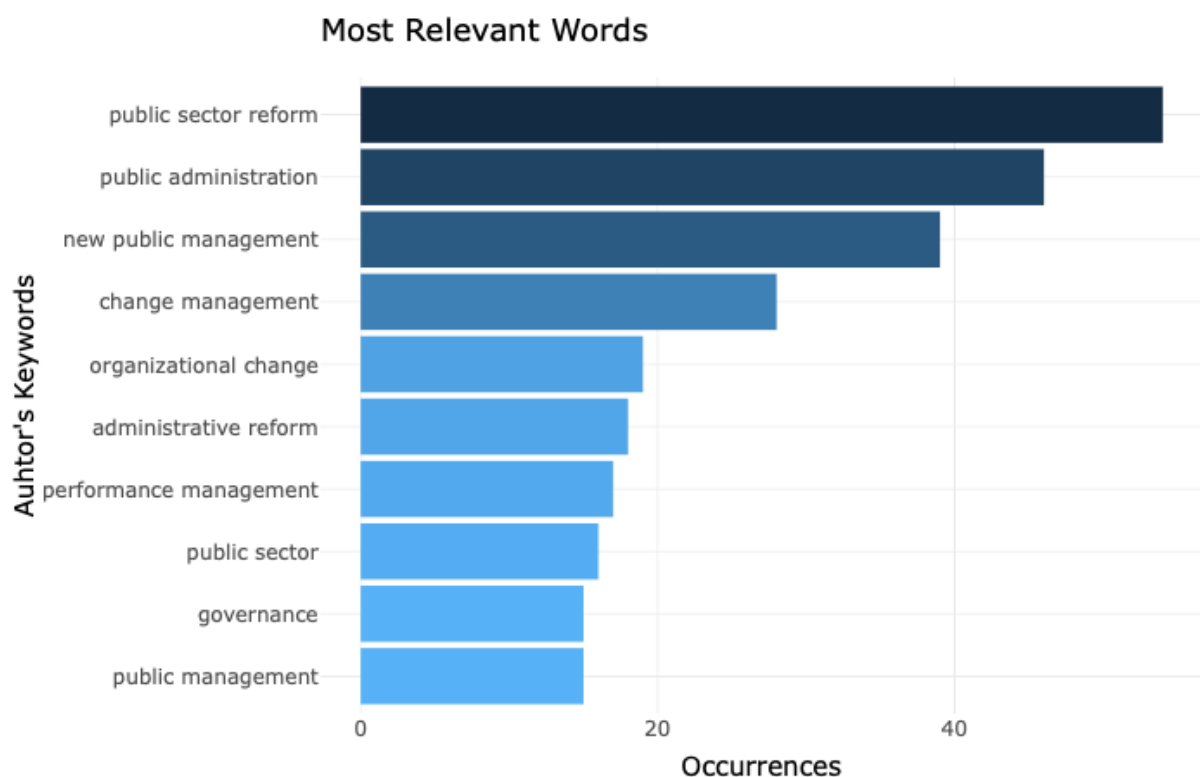


Figure 1.4: Most relevant author keywords. Source: *bibliometrix*.



Two of the most-cited articles in the literature (Van de Walle and Hammerschmid, 2011; Hood and Peters, 2004; Dunleavy and Hood, 1994) explore the topic of new public management, which has profoundly characterized the debate on change management in the public sector.

New Public Management has been defined as a set of managerial approaches and techniques born in the private sector and considered useful when applied in the public sector (Mercurio, 2015; Vigoda-Gadot et al. 2013, 2008; Hood and Peters, 2004).

The spread of this organizational approach, both from a theoretical and a management point of view, began in the 1980s and became central to the organizational debate during the 1990s.

This approach, which finds its initial relevance in the Anglo-Saxon world, has led to numerous reform processes implemented in European public administrations (Borgonovi, 2018). As a basic principle, these public sector reforms have examined the provision of more efficient services by promoting and regulating a system of actors who intervene with different roles and competences in a logic of cooperation and competition in the public sector (Van de Walle and Hammerschmid 2011; Vigoda-Gadot; 2008; Flynn, 2002).

To understand how the relationship between management and organizational change is relevant in the public sector, for our research work, two articles that have tried to define the field of the relationship between these two aspects are particularly relevant.

First, of particular interest that is among those most cited in the literature on the subject of organizational change in the public sector is that of Brunsson and Ahrne

*"Constructing Organizations: The Example of Public Sector Reform"*, published in 2000 in *Organization Studies*.

According to Brunsson (2018; 2000; 1997), one of the leading organizational researchers in the field of change management, public organizations are continually looking to transform themselves into more complete organizations by installing or strengthening a local identity, hierarchy, and rationality. For this reason, the role of management is being able to define the most appropriate organizational processes for changing organizations, as well as being able to manage economic and human resources. Furthermore, Brunsson, in "Reforming Organization" (2000), interprets the reform processes focusing on a further particularly relevant aspect.

In contrast with the researchers of the New Public Management that support the need for a radical change in public administrations using private organizations tools, he states that reform processes in public organizations are a stratified implementation.

The reforms do not affect the organizational actors in disruptive and without warning, but rather, they represent a moment of continuity for public organizations. Indeed, in correlation with Lewin's previous analysis (1951) and as described in the first part of the following chapter, Brunsson (2000) states that administrative reforms are often presented as dramatic changes in the life of organizations that represent a moment of uniqueness and differentiation from the past. Instead, according to Brunsson (2000), reform processes in public organizations must be imagined as an aspect of organizational stability.

As in Brunsson's organizational thinking, another article represents a critical crossroads in understanding the interconnections between managerial skills in the public sector and organizational and managerial skills of economic, technological, and human resources. Another relevant article in the managerial literature on the public sector is the systematization carried out by Fernandez and Rainey (2006) that recognizes eight factors for the effective implementation of change processes in public organizations. The factors described by the authors are as follows:

- i) **The relevance of the perceived need for change:** This factor is appropriate in public organizations where the perception of change by managers and public employees is seen as central to the good performance of the organization. In this case, the role of the public manager is fundamental to transmitting a clear vision to the organization and to the stakeholders regarding the change that is taking place.
- ii) **The role of organizational change planning:** The prospects for organizational change in a public organization become more effective if implemented by starting from an action plan that foresees the positive aspects and the reorganization criticalities of the processes (Thompson, 2011).
- iii) **Overcoming internal resistance:** Organizational change must be imagined from a participatory viewpoint, and the actors should try to activate processes of diffusion of those organizational changes that influence individuals and groups.
- iv) **The public management commitment:** The ability to implement a reform plan in a public organization is more likely to be realized if it is guided by a

group of organizational actors who are capable of consciously directing the organization towards the realization of a process of change (Schedler and Proeller, 2007; Sagie and Koslowsky, 1996; Selznick, 1976).

- v) **The relevance of external support:** The possibility of realizing an organizational change in the public administration becomes more probable if the stakeholders are convinced of the importance of its realization. The aim must be to presume that reforms are not short term but have long-term prospects.
- vi) **Providing resources:** To implement any type of reform process in an organization, it is necessary to clearly define the economic and human resources to sustain the organizational change (Shore and al.2006; Wright and al.2005).
- vii) **Institutionalizing change:** Another crucial factor in the process of organizational change is to settle the new processes and new organizational practices. The implementation of this factor involves, in the experience of public managers, guiding the transition through tools that are able to enhance the changes that have occurred such as, for example, the introduction of systems for evaluating, measuring and monitoring public actions (Stock and al. 2007; Smircich, 1983)
- viii) **Pursuing a comprehensive change:** Another essential factor is the ability of a public organization to develop the process of change between the different entities existing in the organizational structure.

Table 1.4

*Most Relevant Cited Articles in the Literature Review on Change in the Public Sector*

<i>Authors</i>	<i>Article Title, Journal and Year of Publication</i>	<i>Total Citations (TCs)</i>	<i>TCs Per Year</i>
Dunleavy et al.	From Old Public Administration to New Public Management <i>Public Money and Management</i> (1994)	412	16.48
Hood et al.	The Middle Aging of New Public Management: Into the Age of Paradox? <i>Journal of Public Administration Research and Theory</i> (2004)	385	25.6667
Fernandez et al.	<u>Managing Successful</u> <u>Organizational Change in the</u> <u>Public Sector</u> <i>Public Administration Review</i> (2006)	299	23
Brunsson et al.	Constructing Organizations: The Example of Public Sector Reform <i>Organization Studies</i> (2000)	276	14.5263

Noordegraaf	From “Pure” to “Hybrid” Professionalism: Present-Day Professionalism in Ambiguous Public Domains <i>Administration &amp; Society</i> (2007)	232	19.3333
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The previously reported aspect concerning the relevance, in the 2000s, of the subject of transformation processes in the public administration can be compared with the production from the relevant top authors in the period taken into consideration for our survey.

As shown in Figure 1.5, the 2004–2019 period represents a time of academic reflection on the progress of public administration and reform processes.

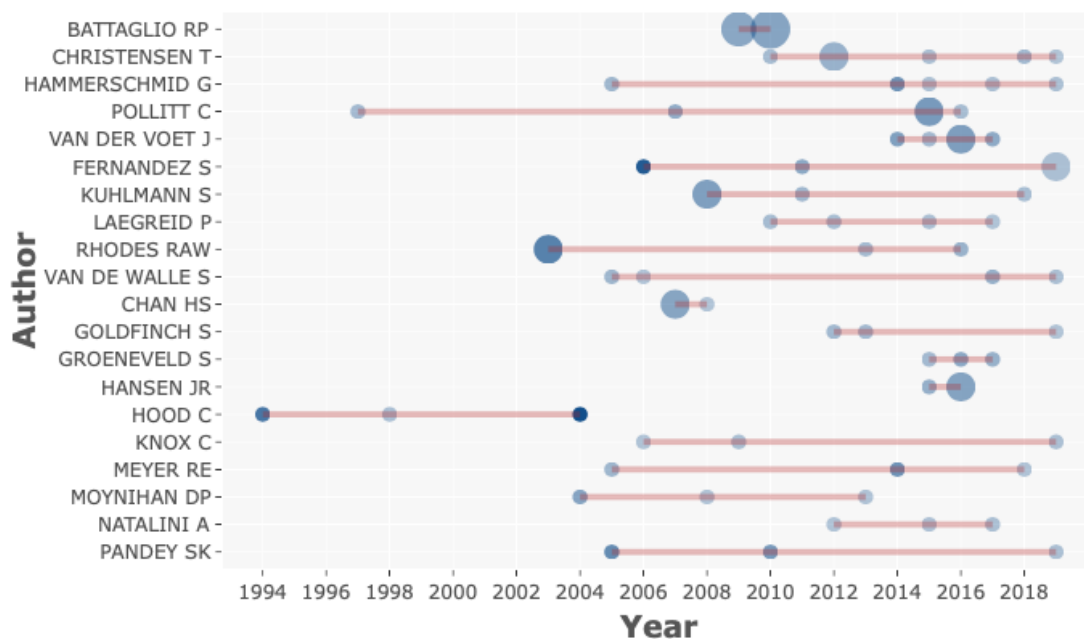


Figure 1.5: Top authors' production over time. Source: *bibliometrix*.

A further analysis that allows us to understand the topics that were most dealt with in the literature concerning organizational change is the analysis of the thematic map that enables an understanding of the centrality of certain issues concerning organizational change in the public sector and the density of the content in the period taken into consideration in our analysis.

The topic of administrative reforms has been especially analysed by organizational researchers. Another particularly relevant topic examined by scholars relates to the impact of administrative reforms on public organizations and the modernization of the public sector. Furthermore, this theme is strongly linked to the use of new digital media to respond to the challenges of change coming from the external environment.

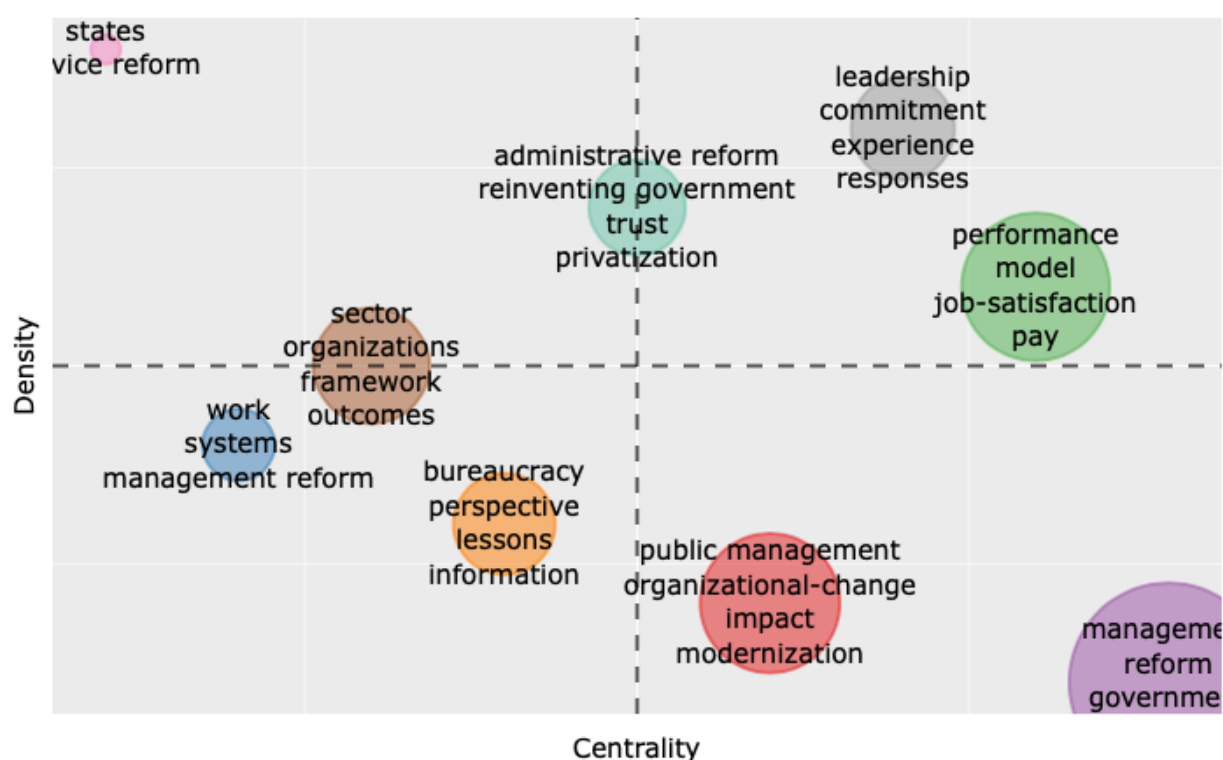


Figure 1.6: Thematic map of the literature review on the public sector. Source: *bibliometrix*.

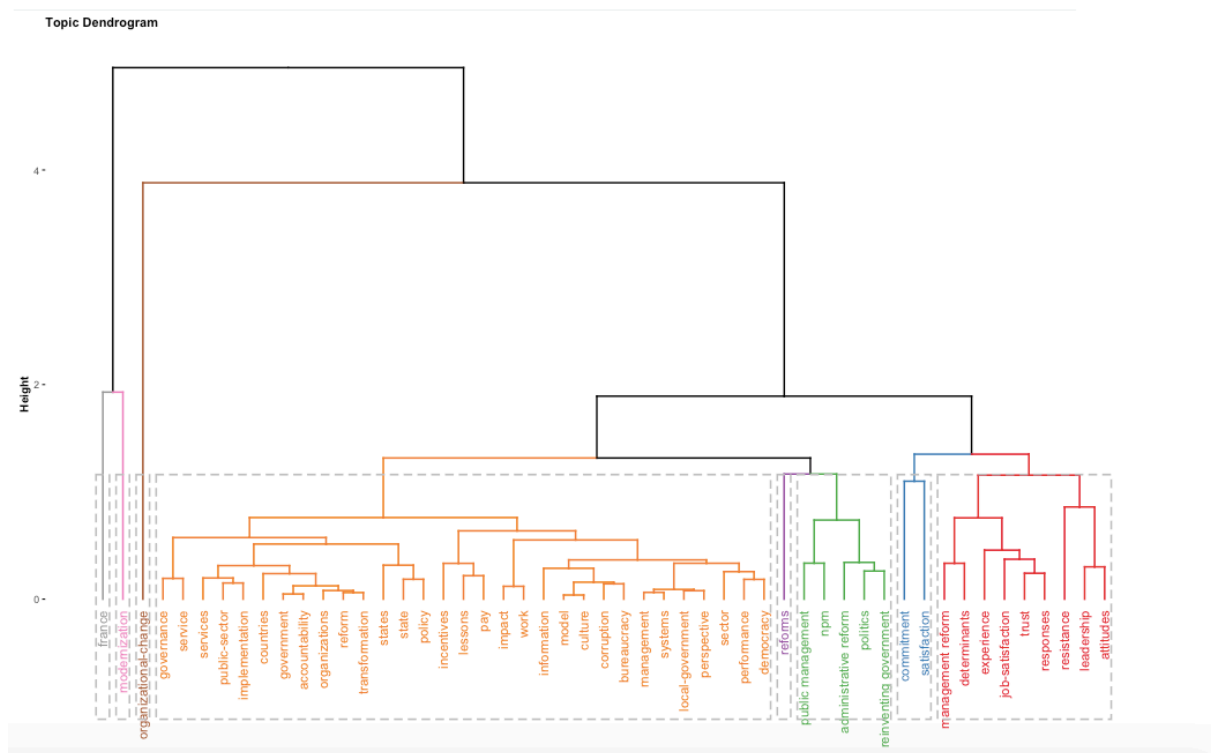


Figure 1.7: A correspondence analysis of keywords on the topic of change in the public sector. Source *bibliometrix*.

In figure 1.6 and in the figure 1.7, the height identifies the distance between the words, or the group of words existent in the keywords that describe the articles' object examined in our analysis. In Figures 1.6 - 1.7 it is possible to note other aspects of particular interest with respect to the issues addressed in the literature on organizational change in the public sector.

Figure 1.6 clearly shows that the themes of "public management" "organizational change" and "modernization" are closely connected to each other.



## **1.6 Final remarks**

The analysis conducted on the review of the literature on the subject of organizational change in the public sector leads to an exciting conclusion. There are two aspects to which (principally in the period 2000 - 2019), the researchers tried to analyse. One of these aspects concerns the managerialism in the public sector and the ability to define reform processes. The second aspect concerns how to implement these reform processes by managing to connect the various resources (economic, human, technological) that are available.

The systematization proposed by Fernandez and Rainey (2006) through the identification of eight factors of organizational change represents a unique key to understanding organizational change, not only through an academic purpose but also through managerial management within public organizations.

Starting from this assumption, a final review of the literature presented in the previous paragraph can be completed by verifying the intensity of the analysis of each factor in the articles that are subject to analysis, as it is possible to highlight in figure 1.5.

Table 1.5

*Analysis of Articles in the Literature Review on Change in the Public Sector with the framework proposed by Fernandez and Rainey (2006)*

N.	<i>Change factors in Public Sector (Fernandez and Rainey, 2006)</i>	Number of Article
1	<i>Ensure the need</i>	33
2	<i>Provide a plan</i>	60
<b>3</b>	<b><i>Build internal support</i></b>	<b>86</b>
4	<i>Top-Management Commitment</i>	59
5	<i>Build external support</i>	35
<b>6</b>	<b><i>Provide resources</i></b>	<b>62</b>
7	<i>Institutionalize change</i>	49
<b>8</b>	<b><i>Pursue a comprehensive change</i></b>	<b>83</b>

Starting from this assumption, it seemed particularly interesting to structure a further final review of the literature presented in the previous paragraph, verifying the intensity of the analysis of each factor in the academic contributions analysed and considered relevant for our research topic. The research activity carried out is highlighted in table 1.5.

To define this articles' categorization, we proceeded through three different steps: First, the articles for the titles' keywords were divided; the second phase involved a careful reading of the abstracts; finally, through a papers' interpretation.

From the analysis carried out, it was possible to assume three factors most used in the papers in the initial data set. In table 1.5 the three most analysed factors are highlighted in red.

The most analysed factor in the literature among those presented by Fernandez and Rainey concerns the need to overcome internal resistance. A path of change in an

organization, particularly a public one, is more lasting if the different organizational actors participate in the change. Regarding overcoming any internal resistance to change, the availability and circularity of information are also considered of fundamental importance to allow the various organizational actors to understand and accept the consequences of the change.

Another of the factors exposed by Fernandez and Rainey (2006) that is relevant in the analysis of the literature on organizational change is that of the crucial role of top management for its actual realization. On this aspect, the analysis presented by Ruffini (2011) is interesting, according to which the change management activity requires a structured and multilevel approach, aimed at defining processes and work systems, organizational and management structures, professional skills, information and technological processes, organizational culture (values, standards, practices), and using a collaborative approach with the various organizational actors (management, employees, unions, internal bodies) regarding the objectives of the change that needs to be implemented (Lægneid et al. 2011; Kroeber, 1952).

The second most-identified factor among those exposed by Fernandez and Rainey (2006) that is relevant in the analysis of the literature on organizational change is that of identifying an integrative and global change approach in public organizations, which, taking up the concept of multilevel change, is structural in terms of the behaviour of the organizational actors and can involve all the subsystems of an organization.

Many researchers (Carter et al., 2012; Hesselbein and Goldsmith 2009; Jung et al. 2009; Tichy, 1983; Nadler, 1981) stress that, in order for fundamental changes to occur in the behaviour of organizational actors, the leaders of change (in this case, public managers)

must be able to make systemic changes to the subsystems of their organization that must be aligned with the desired final state.

Changing only one or two subsystems will not generate sufficient momentum to cause an effective organizational transformation.

Specifically, on this aspect, to plan for organizational change, according to Goldsmith (1992), so as to facilitate the achievement of this process, a work activity shared by all the local innovation actors must be carried out.

According to this approach, the public administration must reject a vertical organizational model and adopt a horizontal one, capable of involving the different public, private and non-profit actors in the design and management of advanced services. Goldsmith (1992) then focuses on the perspective of a public administration whose goal is to pursue – through organizational transformation actions – the recognition and promotion of social networks and existing connections between the public and private spheres, the governance of inclusive decision-making processes and participatory planning.

The third factor that is expressly relevant in the analyses related to organizational change is the need to find resources to support the processes of organizational change.

A well-structured organizational change necessarily involves a redistribution of financial and human resources (Dubin, 2017; Miles, 1965); The review of public spending programmes is now a permanent and central theme in the political-institutional debate on public administration.

Especially after the global economic crisis of 2008, the management of a public organization with a more effective use of economic resources has become even more

relevant, with a strong impact on the methods of planning and managing organizational changes (Hinna, Mameli and Mangia 2016; Kuipers et al. 2014; Ferr and Eckersle., 2011; Kneller, 2000; Freeman, 1984).

In the analysis of organizational change in public sector, the human resource factor is strictly connected to the topic of technological innovation to digitalize the public administration, which is also an important element in the analysis of the factor relating to the role of top management exposed by Fernandez and Rainey (2006). New technologies become a tool to improve the efficiency of public administration (Baldwin et al. 2012, Heeks, 2002) but also an element of the growth of the skills of public employees in providing better services and being promoters of change in the public organization. Also, in this case, effective managerial administration of organizational change becomes central in defining the impact that technologies can have on organizational structures. The economic potentialities that can arise from the introduction of new technologies must be defined in the light of new ways of the division of work and coordination activities (Wynen et al. 2014; Martinez, 2004).

Training civil servants plays a decisive role in the innovation of the public administration and in the dissemination of the concept of organizational change on several levels of the organization. To this end, the role that public managers have in guaranteeing a high level of skills becomes fundamental.

A relevant element could involve the training and learning experience of civil servants that emerges from the field analysis, which is also the result of relationships within a professional community that become ever stronger thanks to digital tools that increase

the possibilities of connection and sharing among civil servants. (Visser, and Van der Togt, 2016; Vigoda-Gadot et al.2013; Kernaghan, 2011, Moynihan and Landuyt 2009).

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## **CHAPTER II**

### **THE DIGITAL TRANSFORMATION TO CONSTRUCT A NEW ORGANISATIONAL MODEL IN THE PUBLIC SECTOR**

#### **2.1 Introduction**

In the conclusion of the previous chapters, it was possible to highlight how relevant it is to know how to coherently define the relationships between economic, human, and technological resources to achieve a complete process of organizational change.

Starting from this aspect, the aim of the following chapter provides a general analysis of the main existing theories in defining the relationship between technology and organizational change. The interpretations which give priority to autonomous technology, such as technological determinism, inevitably relegate social actions, and the relationships to which they give rise, to a secondary dimension (Grint and Woolgar, 2013, Barnes, 2012, Denning, 2011).

Other theoretical approaches have focused instead on the role of actors who contribute to modelling technological artefacts and defining their use (Bijker et al. 1989). These are some of the theoretical approaches to the implementation of specific technological processes.

The topic of the diffusion of a new organizational model in public and private organizations — Smart Working — is then addressed. This organizational model has led to a drastic change in the way in which work performance and the individual's relationship with technology are enacted.

To that end, this chapter intends to provide a detailed description of the fundamental features of this organizational model and the defining and practical approaches which have been implemented within the organizations that have begun to adopt it to overcome other organizational types of work performance such as teleworking.

The chapter also intends to focus attention on the gap of analysis in the recent literature concerning the introduction and effective implementation of organizational change processes through the use of technologies in the public sector related to Smart Working, which is used more frequently in private facilities.

In the final part of the chapter, the constitutive factors of the Smart Working organizational model will be identified, analysing their repeatability within the public context.

This analysis will focus on the different regulatory constraints that exist in the public sector compared to that of private organizations. Furthermore, particular attention is paid to the links between human resources management, use of technologies to support Smart Working organizational processes and cultural contexts of public organizations.

## **2.2 The role of technology in the phenomenon of change management: an overview**

Information & Communication Technologies have changed not only the way activities are approached in organizations and organizational designs but also the way people live, work and communicate (Orlikowski and Barley, 2001, Orlikowski, 1996). Indeed, many studies have addressed how technological innovation determines new paradigms of individual tasks, roles and competence and an adaptation to new environmental conditions (Matt and al.2015, Mitchell and Zmud, 1999, Magnusson, and Martini, A. 2008). In a period of significant technological developments, it is necessary to understand how changing technological phenomena impact on individuals and the achievement of objectives. Over the last few decades, public and private organizations have been engaged in a continuous search for more effective, efficient and innovative processes to respond to the social and economic challenges they face. The dynamics of change in organizational processes are of primary importance in theoretical and practical research in recent organizational studies, and they have been the subject of considerable academic comparison in methodologies and implementation mechanisms. Furthermore, responses to organizational changes increasingly depend on the strength of organizational support for employees during the change process (Huber, 1990). Many studies have shown that individual experience can significantly influence the effectiveness of the implementation of change initiatives (Herold et al. 2007). In this regard, over the last few decades, research has shifted from a macro level to an individual level to better

understand the role of individual factors in facilitating or hindering change processes, acquiring more detailed knowledge on the factors which influence the process. Starting from this aspect, studies have explained that the way employees experience changes is essential to building strategies which guarantee peoples' involvement during changes and avoid their failure. As described in the previous chapter, the spread of ICT has had an enormous impact on how work activities are carried out in the coordination of individuals, groups and management approaches in private and public organizations. As it was possible to analyse in the first chapter, the theme of digital transformation, the use of new technologies and the relationship between organizational subjects and digital tools are relevant from the perspective of analysing transformation processes in organizations. Based on the analysis of the literature presented in this research work, it is possible to define organizational change through digital tools as a process of aligning the organization with individual and structural skills aimed at creating added value in terms of the sustainability of an organization's relations with stakeholders (Venier, 2017).

### **2.3 Theoretical approaches in organizations between individuals, technology and organizational contexts**

The need to implement shared digitalization processes has created enormous spaces for the innovation of production activities with the creation and dissemination of new products and services, new business models and new approaches to relationships between individuals (Tolbert et al. 2006). The complicated relationship



between technology, individual behaviour and organizations has been tackled from multiple theoretical points of view to define and understand the methods of interaction existing between these three factors and to define the positive or negative impact of technologies on decision-making processes, skills and work procedures. As described by Martinez (2004), ICTs represent the outcome of a behaviour implemented by organizational subjects within a specific context. From this perspective, the role of ICTs is both a prerequisite for and a consequence of administrative action.

a) **Technological determinism approach:** One of the main theoretical strands is still that of technological determinism, which sees technology as the appropriate engine of personal and organizational change,

The starting point of determinist thinking is that the characteristics and technical properties of technological artefacts trigger corresponding development processes in organizations and societies (Fleck et al. 2001). The approach affirms the existence of an inevitable path of development for changes in social phenomena determined outside the individual will but dictated exclusively by the potential, in a given period, of specific technologies (Ogburn et al. 1964). In this way, organizational and societal changes are explained by the need for individuals to adapt to technology, which is mostly neutral, and which is crystallized in a mechanistic view of organizations (Morgan 1986; Woodward 1965). Theorists, in stating that the intrinsic superiority of one technology over another motivates its affirmation in society, describes the organizational change dictated by new technologies

as a phenomenon that alone leads to the birth of new organizational structures. From this point of view, two distinct organizational structures adhere to this theoretical approach: i) decentralized organizational structures (Negroponte 1995) and ii) network organizational structures (Davidow et al. 1992; Van Aken et al. 1997). According to some researchers (MacKenzie et al. 1999; Ogburn et al. 1964), for example, starting from the assumption that technological innovations follow an inevitable path of development, once all the elements necessary for its diffusion within society have developed and become common domain, the adoption by the organizations of certain technologies.

This vision of the relationship between organization and technology overshadows the role of the individual and managers in decision-making processes. Technological determinism affirming that organizational changes dictated by technology are inevitable does not deal in sufficient theoretical depth with the relationships existing between individual and group organizational dynamics and technologies. Precisely for this reason, according to Leonardi et al. (2004), many managers, especially in high-tech organizations, use this theoretical approach to justify the decisions taken in the organizations they are in charge of, explaining their inevitability.

Other lines of research in the technology determinism approach have rejected the idea that the social sciences should exclusively evaluate the impact which technologies have on a given organization without analysing what are, on the contrary, fundamental aspects of a process of organizational change: the role

of individuals within organizations and their ability to govern technologies to improve organizations as well as their ability to adapt to a changed organizational context. One of these lines of research is the social shaping of technology.

- b) **Social Shaping of Technology:** Researchers on this topic have paid attention to the way technologies are the result of a deep intertwining of social, cultural and technological processes (MacKenzie et al. 1999; Williams et al. 1996). The technologies are not separable from the society, and the task for researchers is to understand why a particular type of technology, under the same conditions of implementation within organizational contexts, is adopted or not (Monteiro et al. 1996; Mackay et al. 1992). According to some researchers (e.g., Thomas 1994), technology cannot, therefore, be seen as an autonomous force for social, cultural and organizational changes but instead is exclusively a factor in the hands of individuals who, through roles which they cover in different contexts of belonging, can lead to effective organizational change. This theoretical approach aims to demonstrate that technological artefacts are endowed with ‘interpretative flexibility’ at the time of their introduction (Harvey et al. 1998; Misa, 1992; Bijker 1989).

According to this view of the relationship between individuals and technologies, technological inventions can be imagined and developed by individuals with different characteristics. First, therefore, their evolution in society and, consequently, in organizations, is not obvious. Second, this approach aims to understand the mechanisms underlying the ‘interpretative

closure' process of technological artefacts. According to the researchers (Klein et al. 2002; Fulk et al. 1995, Fulk 1993; Pinch et al. 1984) in the evolutionary path of technology, its form, endowed until then with a variety of interpretations, is defined stably. Remarkable criticalities concerning social shaping of technology have been identified in this theoretical interpretation of the relationship between technology and individuals. It was highlighted that the social construction of technology approach does not adequately take into consideration the role which technologies have in power relationships. Technological tools, even though they are not the conscious product of dominant ideologies, reflect economic and social priorities, reinforcing relational power inequalities in an organization.

- c) **Actor-Network theory:** According to French scholars Callon (1986) and Latour (1996), this theoretical approach is an attempt to understand the processes of technological innovation and the creation of scientific knowledge, in contrast to the 'heroic' accounts of scientific progress. The theory of the network of actors underlines and considers all the surrounding factors. Past experiences, tools, cultural factors, restrictions placed in the environment and various other technical and non-technical elements would all be described and considered in a network of actors.

## 2.4 Technologies supporting organizational changes in the public sector

As described in the previous chapter and in the previous paragraph, the topic of digital transformation is a challenge of change in private and public administrations. According to Matt et al. (2015), a digital transformation strategy has four relevant dimensions which are strictly connected: i) the use of technology to improve innovation; ii) changes in value creation; iii) structural changes; and iv) financial aspects to improve innovation.

In the public sector, technology plays an ambitious and strategic role in organizational, cultural and citizens' relationship change (Hazlett and Hill, 2003).

Since the beginning of the 1990s, significant projects for the digitization of public administrations have been developed, which take the name of e-government, intending to modernize public administration through greater efficiency, transparency and administrative simplification, improving the quality of public administration – citizens relationships. The role of technologies in the transformation of public administrations can be framed through three factors on which digitization is going to impact: a) the design and diffusion of services to citizens and the achievement of public sector targets; b) the way in which civil servants' work activities are performed; and c) the design of new organizational models.

### 1. **The design and diffusion of services to citizens and the achievement of public**

**sector targets:** In the stabilization of a global economic system, digital technologies have represented a crucial factor for the creation of new opportunities for economic growth and, above all, for the diffusion of

increasingly efficient services directed at consumers. The bureaucratic organizational model at the base of public administrations necessarily went into crisis by opening the way to the spread of new theoretical and practical organizational approaches which put not only the civil servants but, above all, citizens at the centre of the organization (West 2004). Providing more efficient and increasingly digitalized services represents a significant challenge for public management as does increasing public trust in public administrations (Frey et al. 2015; Tolbert 2006, Chadwick et al. 2003). The creation of value for a public administration is also revealed in the simplification of its relationship with citizens. This can only be accomplished by using new technologies effectively (e.g., data analysis, artificial intelligence, cloud computing). Furthermore, this value creation can also take place through the higher intensity of intervention by citizens in the co-planning of services in order to meet the needs of society (Schmidhuber et al. 2018, 2019; Savory 2009).

## **2) How public managers' and civil servants' work activities are performed:**

Work experience is increasingly approached from a digital point of view, which makes it necessary to increase the willingness of civil servants to use new technologies. The use of ICT tools becomes more satisfying for those who have another degree of digital training, allowing them to redesign their work content independently. In general, according to Martinez (2004), the digitalization of tasks inevitably involves the way from simple, stable actions for the solution of full problems to functions defined as 'enriched' for the resolution of less structured, more varied and more complex organizational issues. The topic of

improving one's work performance can be framed not only from a technological point of view but also from the social mechanisms which change. Changing one's work performance should be seen not only from a technological perspective but also in terms of the power relations which change between the organizational subjects and in view of work-life balance (Rieley and Clarkson, 2001).

According to Worrall and Cooper (1999), in contrast with the past, civil servants in recent decades have placed more value on their time at home (Saltzstein et al. 2001).

This development is strictly connected with work-life balance. In terms of this balance, in general, it is possible to imagine new flexible work models for employees concerned with choosing their work location and working hours (Rau and Hyland 2002). These flexible options can be grouped into two clusters: a temporal cluster and a space flexibility cluster (Maxwell et al. 2004, Glynn et al. 2002).

- i) **Temporal flexibility:** This cluster involves employees applying different solutions in terms of time to complete their work activities. For example, it is possible to reposition working hours between different days or to reduce the number of working hours to part-time.
- ii) **Space flexibility:** This cluster includes all possibilities for working from a different site, such as another office of the company, a co-working space, an office shared with peers, or at home.
- iii) **The design of new organizational models:** In this perspective, the role of digital technologies has led to the design and dissemination of

new organizational models and structural changes in public administrations often taken up by private organizations.

One of the first models to implement temporal and space flexibility was teleworking.

The first definition of telework was created by Nilles, who coined the term 'teleworking' in 1975 to describe the first form of a work configuration in which employees have more opportunities to use different technological tools to improve the family-work balance. In addition to the potential for individual improvement, this company organizational model was implemented to achieve greater competitiveness in response to the challenges of the global market. Teleworking helps organizations and management to reduce costs and to ensure greater efficiency and transparency in the organizational process (Baruch 2000; Bailey and Kurland 2002). Nilles has argued that telework is a concept which covers a different range of possibilities for working activities, including workers who work at home part-time or full-time.

According to Martinez (2004) and Wigand (1997), in terms of the spatial distribution of work performance, it is possible to identify four relevant types of teleworking. The first type is 'home-based telework'. This way of performing work mainly involves the low-skilled activities or even the managerial activities which can be performed at home. The second type of telework is linked to the birth of the '*telecottage*'. These structures are satellite work centres created to avoid commuting and, if used by several companies, to reduce the costs associated with managing offices. (Harrison and Qvortrup, 1989).



Mobile or remote workers represent a third way of teleworking. These professional figures are usually consultants but also include many managerial positions. In this way of carrying out work activities, the availability of advanced technologies is a fundamental factor for coordinating the activities with the physical offices. The last mode of telework is on-site, which involves carrying out work at a customer or supplier site. Such workers are professionals who work stably at other companies.

This organizational model defines some aspects which must necessarily be defined, and which will also be discussed in relation to Smart Working. Telework requires the adoption of specific coordination methods. Standardization procedures and hierarchy are challenging to apply.

In this way, the organizations pass to a standardization of the organization's objectives to facilitate their definition in a perspective of evaluation of the organizational results. (Mangia and Cantoni, 2005; Martinez 2004).

Due to the economic crisis of the early 2000s, many private and public organizations are realizing the importance of preserving their organizational full potential, looking for increased competitiveness, productivity and social cohesion. For this reason, many organizations have tried to simplify the teleworking system and make it more flexible, reconsidering the role of employees with a new organizational model and approach defined as Smart Working, which will be analyzed in the following chapters (Chiaro et al. 2015).

## 2.5 Smart Working as a new organizational model: constitutive features

Smart Working is a strategic update of the potential of teleworking and delivers benefits both for businesses and for employees. It is possible to locate some definitions of Smart Working. According to Blackwell (2008), *“Smart Working is the newly coined term that embraces the entirety of new ways of working opportunities in an integrated manner — be that spatial and temporal autonomy, the required cultural and trust transitions, technological advances, wider intellectual connections and stimuli, social, ethical and environmental sensitivities — all harmonized to suit the individual working style.”*

According to the Chartered Institute of Personnel and Development- a professional UK organization - Smart Working is *‘an approach to organizing work that aims to drive greater efficiency and effectiveness in achieving job outcomes through a combination of flexibility, autonomy and collaboration, in parallel with optimizing tools and working environments for employees.*

These definitions highlight the essential role of policies oriented to flexibility and of the cultural change in HR practices which appreciate the relevance of technologies in this new model. Employing effective practices is a crucial goal for all activities, and Smart Working is applicable to all types of operations. Recent studies (Torre and Sarti, 2018; Riccò and Porta 2007) have identified the elements which characterize a Smart Working model in private organizations: *i) ICT tools; ii) workplace design; and iii) HR Management.*

- 1. ICT tools:** A Smart Working model is based on the use of ICT solutions to reconfigure workplace designs and to innovate the management and training of employees (Bertolino et al. 2011, Danziger et al. 2002).

ICT tools also play an essential role in streamlining the sharing of information and files, facilitating better interactions in real time between employees and managers, and enhancing employees' work flexibility in time and space (Riccò and Porta 2017; Alessandrini and Pigliaberi 2016, Olsen and Dahl, 2010). Organizational models based on the Smart Working approach even envisage the possibility that work performance takes place outdoors. Finally, the Smart Working organization model operates on the logic of 'Bring Your Own Device' (BYOD), which concerns the possibility of workers using their own personal devices in the performance of work. The use of personal devices to access information relating to work from any location means paying particular attention to security issues because it is essential to protect corporate infrastructure and employee devices.

- 2. Workplace design:** This element in the design of Smart Working organizational models is considered a useful component for rethinking the strategic processes of companies and is closely connected with the use of ICT solutions to improve the work-life balance of employees and the effectiveness of organizational processes (Tagliaro and Ciaramella, 2016). The physical redesign of the workplace is an approach which also requires a profound cultural change in the organizational model, both public and private, and the rethinking of the modalities which characterize work performance not only within the company

but also outside it from a perspective of greater flexibility, virtualization and collaboration between workers, thinking, for example, about the creation of private open spaces which encourage collaborative work or co-working spaces which reflect the greater diffusion of work on the move. In these cases, we are talking about ‘workplace change management’, an organizational change which also encompasses the review and redesign of the spaces. Finally, in this new approach, implementing a Smart Working model redefines not only an organization’s physical space but its digital space as well.

According to many researchers (Dery et al. 2017; Ravenscroft et al. 2012; White et al. 2012; Benson et al. 2002), with the introduction of ICT tools, private and public managers have the opportunity to redefine the boundaries of digital spaces. Such redefinitions take place thanks to the enabling of new technologies which support processes with a view to integration with the physical space in which work is performed. Redesigning offices to adapt them to employees’ working needs in terms of collaboration, communication and concentration means, on the one hand, putting people in the ideal conditions to carry out their activities and, on the other hand, making environments more efficient and better used with a consequent reduction in fixed management costs and a savings for the public administration or the firm.

To conclude, the performance of work moves definitively from the concept of physical presence in the office. The ICT tools described above become central to enabling everyone to work anywhere (Torre and Sarti 2018).

**3. Human Resources Management:** As described in previous chapters, technologies have had an impact on organizational processes and have transformed how private and public managers organize, select, train and motivate employees (Stone et al. 2015).

According to Hartog et al. (2015), change in workers' behaviors in organizations is a relevant element to developing a Smart Working model, especially in terms of training activities to refine the use of ICT tools and to increase employees' empowerment (Zappalà 2017; Riccò and Porta 2017; Stone et al. 2015; Cameron and Green 2012). From the perspective of human resource management, the objective is to enhance human resources through a process of accountability in the implementation of work performance linked to the objectives of the organization. To overcome the real difficulties related to the implementation of this organizational mode, public and private managers must set up and manage the work, planning and delegation of objectives (Lake, 2013). The Smart Working model allows management to transfer its control activity from the management and verification of rules and requirements to the planning and control of results. However, the issue of empowering public employees clashes with the issue of employee control. Since part of the performance of work is no longer carried out physically in the offices, the control necessarily takes place remotely with control on employees' devices. This aspect, especially in public organizations, is defined through a regulatory agreement between the parties involved. The topic of leadership is relevant in the processes of experimenting

with and implementing Smart Working models from the perspective of increasingly trust-based organizations.

In recent decades, workplaces in both the public and private sectors have undergone enormous transformations (Zhou and Hoever, 2014) Thanks to the digitization of processes, we are faced with organizational contexts in which employees have significantly greater responsibilities and tasks have become less formalized and more complex (Ilgen and Hollenbeck, 1991). We have moved away, therefore, from traditional and hierarchical leadership towards leadership ever more oriented towards relationships and to collaboration with employees. This more participatory leadership approach is not just about top management but the entire proximity of the management chain to the workers who follow their daily work performance (Budhwar, 2000; Whittaker and Marchington 2003; Maxwell and al. 2004). In particular, managers have the task of defining and facilitating the performance of autonomous work activities with the most appropriate tools to achieve the desired objective (Spreitzer, 1995)

Tab.2.1

*The key elements of Smart Working*

Field	Key Elements
<b><i>ICT</i></b>	Personal ICT devices (e.g. PC, tablet, etc.) External ICT services (e.g., programmes) Extend the use of ICT tools to any place and any time
<b><i>Space organization</i></b>	Workplace redesign Office virtualization
<b><i>HR</i></b>	Change management actions Reorganization of processes Training for employees Communication plans Delegation

A focus on HR management is crucial in a Smart Working model. Managers have the key role in developing the orientation of firms in the preliminary phase of introducing Smart Working (Sarti and Torre, 2017, Dagnino et al. 2016). According to many authors (Gastaldi et al. 2014; Torre and Sarti 2018), it is possible to identify three different development steps of Smart Working:

1. ***Trial phase***: The way of working is tested on a limited number of people or in a limited part of the organization;

2. ***Extension phase:*** In this step, if the results of the trial phase are positive, management must improve the Smart Working model for several employees; and
3. ***Full operative phase:*** The project has become a common practice in the organization. It is possible to complete work performance in co-working spaces, at external business centres or at other private organization's offices. In the case of public administrations, it is specified whether co-working is intended within spaces of other public administrations. According to Gastaldi et al. (2014), the elements which characterize an organization defined as 'Complete Smart Working' are: i) the diffusion of Smart Working to all employees; ii) employees' full autonomy to choose working times; and iii) employees' self-certification of working hours.
  - i) **The diffusion of Smart Working to all employees:** The introduction of Smart Working develops a path of enormous responsibility and discipline in the performance of work and work-life balance, avoiding the risk of falling into episodes of work intensification and learning to manage the time dedicated to private life and professional life, respectively.
  - ii) **Employees' full autonomy to choose working times:** Smart Working brings with it an initial planning and coordination effort for both management and workers. This new way of working has as a pivotal moment in the process of organizational implementation the



identification and ex-ante programming of the activities which will be carried out remotely in order to identify:

a) the most suitable place of work to carry out certain activities, without prejudice to the relationship with colleagues and, therefore, coordination with them.

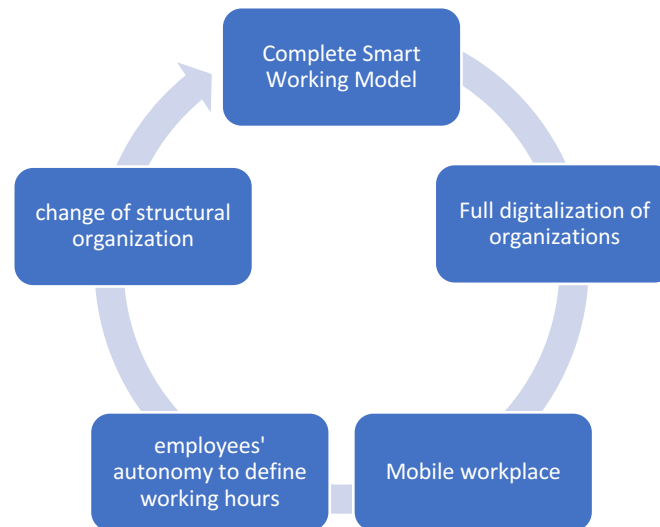
b) The logic of results, which necessarily implies the activation of accountability mechanisms and the request to workers to approach responsible work from a perspective of trust.

- iii) **Employees' self-certification of working hours:** To realize this last step in the development of the Smart Working model, the role of the management is key in several areas. First, a change becomes necessary in the approach of managers in their relationships with employees. Second, given a maximum implementation of Smart Working, employees have maximum discretion in terms of time management and the achievement of results. This necessarily involves a different approach by managers to delegate responsibility and trust employees (Torre and Sarti 2018).

This flexibility needs to be introduced gradually within organizations. For this reason, the training of employees becomes central to defining the field of action of their work activity, understanding how ICT tools can facilitate the achievement of results and understanding the potential of work-life balance (Gastaldi et al. 2014).

*Figure.2.1*

*Configuration aspect of a Complete Smart Working model (adapted from Gastaldi et al. 2014)*



## **2.6 Smart Working in public sector: a perspective of change**

The evolution of political, economic, technological and regulatory factors over the last few decades has induced public organizations to introduce significant incentives for innovation. These changes in context have led to a generalized need for transformation to assure the supply of innovative and quality services to groups of users with different and complex needs (Canonico and Tomo, 2018; Hinna et al. 2018; Mercurio et al. 2015; Hinna, Mameli and Mangia, 2006).

For a public organization, the response to these challenges is complicated because of the strong technical constraint to which public administrations are subjected through regulations and legislation, which require an essential planning and management effort by public management (Decastri 2006).

Technologies represent a decisive factor for the public sector to intercept changes in society (Bekkers et al. 2011, 1999).

As highlighted in the previous paragraph, Smart Working is an organizational approach which combines flexibility, autonomy and collaboration between managers and employees to achieve greater efficiency and effectiveness in organizational performance. This design effort needs to identify a different way of understanding the public organization, in which the achievement of results guides the choices of work organization. First of all, public managers must have a leadership style which is no longer based on presence control but on trust-based leadership. This style of leadership entrusts more responsibility to civil servants to improve results and generates autonomy and the ability of employees to manage their own activities with a consequent increase in performance, motivation and the possibility of effective work-life balance (El-Gamry et al. 2018.).

Second, the process of experimenting with Smart Working in public administrations needs a well-defined design which considers the needs of civil servants while respecting regulatory requirements. In European public administrations, it is possible to identify a growing diffusion in terms of flexibility in the place and time of work as a result of the implementation of Smart Working models. The reasons for the introduction of Smart Working practices vary.

- i) **Reduce management costs:** As an example, in the United Kingdom, the main requirement to introduce a Smart Working model was the reduction of physical spaces, often due to government requests to reduce management costs. In 2004, the British government released its operating guide for public

administrations, ‘Working without walls’. In 2008, the government released another guide, ‘Working beyond walls. Finally, with the Civil Service Reform Plan of 2012, the Cabinet Office launched ‘The Way We Work (TW3)’, a guide for UK public administrations for the complete implementation of Smart Working initiatives not only redefining physical spaces but also organizational processes, the use of technologies and the work-life balance of civil servants.

- ii) **HR management:** The Netherlands provides another significant example of the implementation of a Smart Working model. Starting in 2018, in central public administration (Rijksoverheid), the government reassessed its strategic Human Resources Management policy with the introduction of the guidance, titled ‘Working for the public good - Strategic government human resources policy 2025’, which was adopted by the Cabinet on 13 July 2018. The policy contains seven new focal points for strategic HR policy, including the implementation in public administrations of smart working methods<sup>1</sup>.

In conclusion as has been previously described, four key aspects to verify the possibility of realizing the Smart Working in the public administration:

1. **Rules:** Specific regulations and guidelines must be implemented for each public administration to start up a Smart Working pilot project. In these regulations working hours, activities subjects, and privacy protection policies are defined.

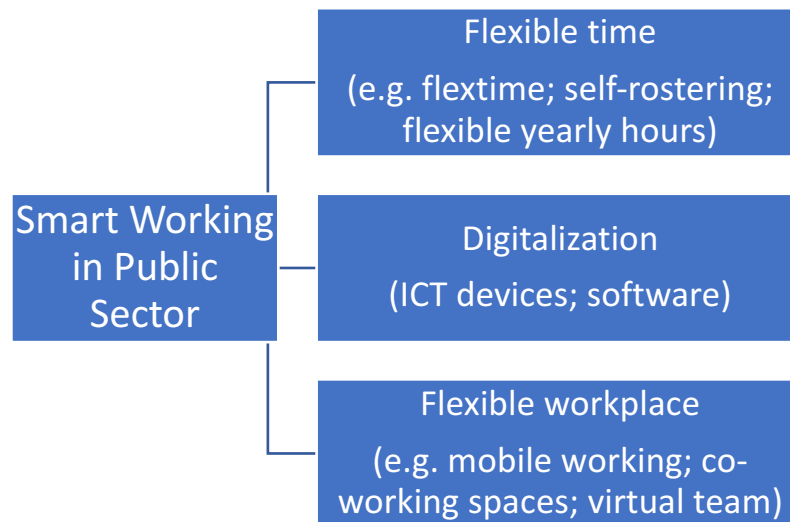
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<sup>1</sup> Working Anytime, Anywhere, On any Device - Netherlands Government - <https://www.youtube.com/watch?v=4oT7asQCsC0&feature=youtu.be>

2. **Logistics:** Introducing Smart Working organizational models means providing interventions to be carried out in redefining the internal spaces of the organization's physical structures, combining them with co-working, with the multi-purpose re-use of internal areas no longer used, taking advantage of the role that may have new digital infrastructures;
3. **Information Technology:** Public administrations must adopt from a technological point of view. Work in Smart Working requires communication and sharing platforms, remote management, and project management applications, as well as, of course, adequate security and network infrastructure.
4. **Organizational and cultural aspect.** Work flexibility is possible only in a cultural organizational change and in a review of organizational processes that provide for adequate management styles (management by projects and by objectives, with indicators based on results), a high degree of freedom (self-management, empowerment), management even at a distance of work teams and an enhancement of collaboration and knowledge management processes (Ambra, 2018).

*Figure.2.2*

*The implementation actions of the Smart Working model in the Public Sector*



## **2.7 Final Remarks**

This chapter has focused on one of the most debated topics in organizational studies, namely, the relationship between technologies, individuals and organizational structure.

The first part of the chapter provided a brief theoretical study of the problems of the relationship between technology and individuals to identify the elements which might be taken into consideration when considering the organizational perspective in imagining the dissemination of effective digitalization practices in public and private organizations.

The phenomenon of digitalization in organizations has created the conditions in which, in recent decades, new organizational structures could be developed that combine the use of innovative technologies with the desire on the part of individuals to find new ways of working in the organizations to which they belonged, ways involving greater operational responsibility and, at the same time, more significant benefits in work-life balance (Barnes, 2012, Cordella et al. 2010; Hazlett and Hill, 2003).

Based on these assumptions, the second part of this chapter described new organizational methods, such as teleworking and, recently, Smart Working. The diffusion of experimentation in Smart Working represents not only an essential laboratory of organizational innovation but the opportunity to develop a new cultural perspective, one which focusses not on legal and budgetary constraints but on people in the context of public administrations (Tiraboschi, 2017).

In the final part of this chapter, we analysed the constituent elements of a Smart Working organizational model, and, from this analysis, it emerged that an organizational and performance modality is much more present in private organizations than in public organizations. This gap is also found in a review of the literature.

Many studies analyse the benefits and critical aspects of Smart Working and the role of management in private organizations, but the implications and the role of management in the adoption of this model in the public sector are still unknown.

The role of the public manager is significant because acting in Smart Working means distrusting the traditional constraints related to place and time, leaving people more autonomy in defining the working methods in the light of greater responsibility on the results.

The work's autonomy, which therefore coincides with empowerment, enhancement of talents, and trust within its offices.



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# CHAPTER III

## AN IMPLEMENTATION ANALYSIS OF SMART WORKING IN THE ITALIAN PUBLIC SECTOR

### 3.1 Introduction

In the previous chapters, the objective was to define the theoretical aspects, and the interpretative lines at the base of the description of the phenomenon of organizational change and the role played by technologies, especially in the public sector, the topic of study of the following research work.

The following chapter, which is the empirical part of the work carried out, aims to investigate the topic of the organizational impact of the Smart Working model in the Italian public sector.

As has already been aimed in the second chapter, although there are numerous analyses on the Smart Working concerning Italian normative and regulatory points of view, there are few analyses concerning organizational and managerial issues of Smart Working in the Italian public administrations<sup>2</sup>.

As clarified in the previous chapter, the introduction of the Smart Working Model is particularly interesting in the analysis since it puts in close connection the use of new

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<sup>2</sup> According to the Smart Working Observatory of Politecnico di Milano, 8 million 359 thousand employees in Italy, potentially employable in smart working mode.

According to the research activities carried out by the Politecnico, if a third of them were granted the opportunity to work occasionally or permanently in the "agile" modality, they would reach 2 million 758 thousand.

According to data from Politecnico di Milano, only 8% of Italian public organizations started structured smart working pilot projects in 2018 (up from 5% in 2017), and 1% did so informally.

However, in 36% of cases, Smart Working in Italian public administrations is absent, and 7% is not even interested, at the moment, in its introduction.

technologies, significant for effective implementation of this model and managerial aspect of organizational change.

In the first part of this chapter, we will proceed to examine in detail the main methodological questions that are the basis of the following research work. The methodological choice fell on a qualitative typology.

This choice will be described subsequently starting from the assumption that the possibility of proceeding to interviews with the various subjects identified within the public administrations was the most suitable to understand the dynamics of change, the perceptions of the functioning or otherwise of a process of implementation of a new organizational model, as well as understanding the practices used in the public administration concerning the use of new technologies.

In the following paragraphs, on the other hand, we will define and clarify in detail the design of the research, specifying the object of the investigation, the founding objectives of this research work, the phases and methods in which the instruments identified for the collection of data.

Finally, the processed data will be discussed, providing a final examination of the results obtained.

### **3.2 The context: the evolution of Smart Working in the Italian public sector**

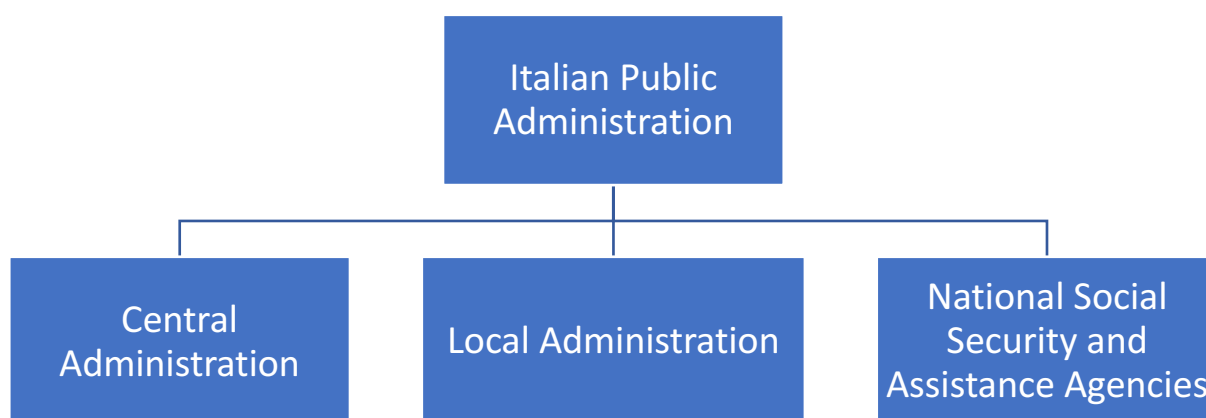
The objective of this section is to define a comprehensive overview of the evolution of the Smart Working model in the Italian public sector. Firstly, it is relevant to analyze the structure of the Italian Public Administration, starting from the last classification of

the National Statistical Institute (ISTAT). Finding a categorization is a relevant starting point to associate information to a specific cluster, and the following classification has been utilized to investigate and identify the case study of this research. The Italian Public Administration it is composed by:

- ***Central Administrations:*** This categorization includes State, Ministries, Constitutional entities, some economic and research entities as ISTAT, and CNR. These public administrations recognise their activities in all the Italian national territory. The activities on the local region is carried out thanks to the decentralised organising.
- ***Local Administrations:*** This categorization includes administrations that realize their activities in a limited part of the national area as Regions, Provinces, Municipalities, ASL, Universities.
- ***National social security and Assistance Agencies:*** These public organizations provide currencies benefits through contribution. In Italian public sector these administrations have a relevant position in the citizens' protection.

**Figure 3.1**

***Configuration of Italian Public Administration***



Concerning the number of civil servants in the Italian public administration, the most up-to-date information available is that fixed by ISTAT- Italian Statistical Institute - in a report released in 2019.

At the end of 2017, ISTAT examined 12.848 Italian public administrations. The total number of workers in public institutions is 3.516. 461 units.

Three million three hundred twenty-one thousand six hundred five are employees (94.5% of the total). The 5.5% - approximately 195.000 units - are employees with other atypical contractual forms.

In detail, 54.6% of civil servants are in the central administration (which also includes school and armed forces and security personnel); 19.8% of public employees are employed in the companies or bodies of the national health service, 11.3% in municipalities, which represent almost two-thirds of public administrations. The remaining 14.4% of civil servants is in other public administrations.

The women civil servants in the Italian public administration are 2 million and are the majority component, with a share of 56.9 % of the civil servants in service.

According to the last census on public administrations carried out by ISTAT, in 2017, 87.9% of Italian public institutions used the web for data management and to release their services.

This aspect is relevant because it highlights how the use of technology is now consolidated in all public organizations.

However, according to the census carried out by ISTAT, the use of technology is slightly lower in local administrations, Municipalities (87.4%), and Mountain communities and municipal unions (85.8%)

As part of the organization of work activities in the Italian public administration, the widespread diffusion of technologies has allowed us to imagine innovative organizational models such as Smart Working (Ballistreri, 2016).

According to Borgonovi (2018), the way of reform of the Italian public sector began between the late 1980s and 1990s to give new principles, methods, and management tools to the public administration, in response to socio-economic changes.

These reforms begin from the contribution of managerial and economic-company studies to the analysis of inefficiencies of public administrations<sup>3</sup>.

In Public Administration reforms, the Italian regulatory framework on Smart Working in the Public Administration is defined by:

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<sup>3</sup> Between the several reforms of the Italian public administration of the early 90s, it is possible to remember the L. 142/90 and the L. 241/90, the L. 29/92, and L. 81/93, in addition to all the so-called Bassanini reforms of the late 90s.



- a. *Law n. 124/2015 (art. 14) "Delegations to the Government regarding the reorganization of the public administrations";*
- b. *Law n. 81/2017 (articles 18-24) "Measures for the protection of non-entrepreneurial self-employment and measures aimed at favouring flexible articulation in the times and places of subordinate work";*
- c. *Directive of the Council of Ministers (PCM) n. 3/2017: "Directive of the President of the Council of Ministers containing guidelines for the implementation of paragraphs 1 and 2 of Article 14 of the Law of 7 August 2015, n. 124 and guidelines are containing rules concerning the organization of work aimed at promoting the work-life balance of employees".*

As described previously In Italian normative, the Law n. 81/17 (art. 18-24) regulates the Smart Working defining it as **"agile work."**

This way of doing work performance is defined as the *"mode of execution of the subordinate employment relationship established by agreement between the parties, even with forms of organization by phases, cycles and objectives and without precise constraints of time or place of work, with the possible use of technological tools for carrying out work activities "*.

In particular, the standard refers to the performance of work performance partly within the company offices and partly outside without a fixed location, within the limits of a maximum continuation of daily and weekly working hours, deriving from the law and collective bargaining. "

The law's section three specifies that the regulatory provisions also apply to *"employment relationships with public administrations"*.

The Italian Directive n. 3/ 2017 formally starts the introduction of Smart Working in the Italian public administration. The Directive defines the guidelines of this new organizational model and clarifies the aims of the introduction of Smart Working model in Italian public sector:

- a. Introduction of the most innovative ways of organizing work, based on the use of working flexibility;*
- b. Evaluation work performance based on the achievement of goals;*
- c. Recognize the needs of civil servants in a view of work-life balance.*

Article 14 of the Law n. 124/15 establishes that all the Italian public administrations must adopt guidelines on Smart Working to reach at least 10% of civil servants who require it to take advantage of this new working method in three years, maintaining, in any case: *"the opportunities of growth and career for these civil servants"*.

The law detailed that the adoption of these organizational measures and the achievement of the law's objectives are the items of evaluation for public managers. This part is relevant in the context of the performance measurement criteria, both organizational that individual performance.

Finally, another critical aspect to take into evidence concerns the economic resources that can be made available to implement Smart Working. The Italian Government Directive n.3/2017 indicates that the introduction of organizational measures aimed at work-life balance must be carried out within the limits of the budget resources available without new or more significant burdens for public finance.

Aid to operate in smart working requires an individual written agreement public management and civil servants. According to Tiraboschi (2017) it is possible to identify this relevant aspect that the agreement regulates:

- a) The performance outside; the place of work activities and technological devices assigned;*
- b) The civil employees' working hours and rest times;*
- c) The civil servants' right to disconnect from the technological devices after your work's activities.*

As can be seen from the analysis of the Italian legislation concerning smart working, it is possible to identify that, like telework, smart working does not take the form of a new type of contract, but constitutes a way of carrying out subordinate work that reflects organizational changes compared to places and work times. Compared to teleworking, which was introduced into Italian law for public employment with law n.70 / 1999, it is possible to find some different aspects concerning Smart Working.

The difference between teleworking and smart working can be found in the non-continuous nature of work performance and the absence of a fixed workstation but identified by an agreement with the civil servants. In teleworking (art.3, DPR n.70 / 1999) is predicted a unilaterally elaborated project that is assigned to the civil servant in telework.

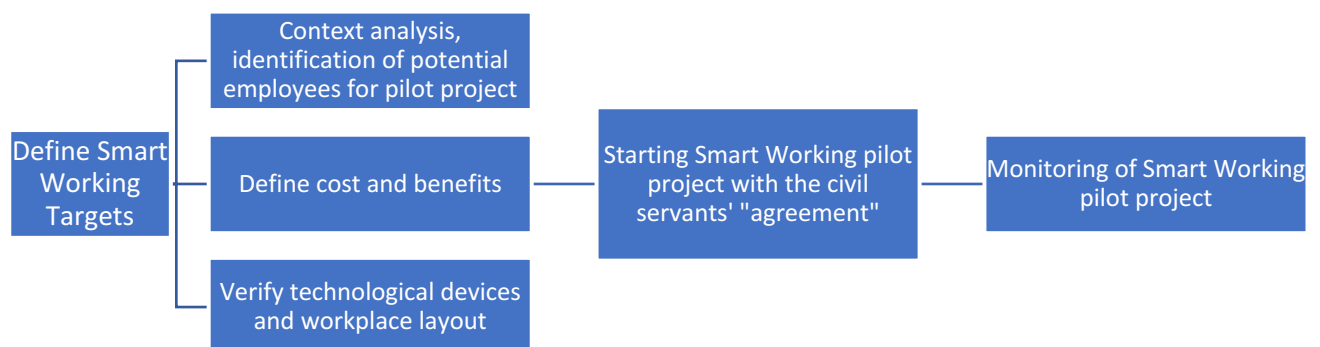
Furthermore, in the Smart Working, an "agreement" is prepared where a series of conditions are determined such as time and place, rest, exercise of powers, use of the technological system consisting of a set of computer equipment and programs, which it

allows the carrying out of activities remotely, with installing, tested software whose maintenance is the responsibility of the administration.

An added aspect that distinguishes teleworking from Smart Working is the assignment of technological devices, which, in the regulatory framework of teleworking, is required, while in Smart Working, it is only possible. In fact, in support of this claim, the 3/2017 Directive recognizes that when technological tools are supplied to the smart worker, the administration must ensure compliance with technical standards and specific training on the use of the technological devices" possibly made available.

**Figure 3.2.**

***Italian Government Directive n.3/2017 – Adopting process of Smart Working***



### **3.3 Research objectives**

In previous chapters, we have focused on how the topic of organizational change has become fundamental to organizational studies due to the crucial role they play in achieving social and economic well-being in communities. This reflection of the organizational change in the public sector has become increasingly relevant, seeing as in recent years a succession of public sector organization is linked by three factors: collaboration, the responsibility of civil servants, the role of public managers to achieve economic and human resources. According to Fernandez and Rainey (2006), as described in the first chapter, the success of an organizational change is tied to seven factors that can make a process of organizational change concrete and long-lasting.

One of these factors is that of being able to identify and know how to manage the resources available. In modern organizations, in addition to economic resources, it is essential to know how to coordinate and manage the relationship between human resources and technologies.

In detail, in public organization, it has become necessary to understand the practical effectiveness of the implementation of new technologies and the role that individuals, public managers, and civil servants have in making processes effective implementation of new organizational models based on their use, in detail, the Smart Working model that the constitutive features as described in the second chapter.

To this end, the attention paid to the research activity that will be described later focused on trying to answer some questions that are fundamental to understanding how public

managers and civil servants currently see the process of trial phase of the Smart Working model:

- a) *If the implementation of the Smart Working model is seen as a practical and concrete possibility of more significant interaction between technologies and individuals in the public administrations.*
- b) *If introducing a Smart Working model in public administrations create an active process of organizational change in which greater trust is established between managers and public managers to achieve the goals set by the public administration with a greater efficiency and effectiveness.*
- c) *If it is possible to switch from a model of public administration focused entirely on the presence in the office to one connected to a higher virtual presence. This passage is to facilitate work-life balance and decrease the stress conditions of public employees.*

### **3.4 Methodology and research design**

As anticipated in the following chapter's introduction, a qualitative methodology was chosen.

A qualitative methodology it is considered applicable to the specific field of analysis and to the object of investigation chosen, concerning the particular historical moment.

Moreover, a qualitative methodology, in an increasingly complex society in which the processes of operational autonomy are central in the interaction of individuals with their respective organizational structures, seems to be able to provide an authentic

interpretation of the meaning of each individual's actions (Cassell and al. 2006; Denzin and Lincoln, 2002, 1995).

Indeed, a qualitative methodology, according to many researchers (Gentles et al.2015; Roulston, 2010; Richards, 2005; King L.A. 2004 King N. 2004, Kvale 1983) fills the words with meaning used by the subjects in their interviews, providing, in the analysis phase, a greater understanding of the constraints and opportunities that a phenomenon of organizational change has under the cultural and relational dimension.

The qualitative approach in the research project presented in this work becomes essential to examine the actual practices of understanding a new organizational model. This qualitative approach allows, in an initial phase of dissemination of new organizational approaches to understanding the traces from which researchers can reconstruct the meaning and boundaries of organizational action (Maxvell, 2012; King N. 2004).

To meet this topic, in this research activity, the methods of interviews were identified and using among the qualitative methodology. The choice of the method of interviews is consistent with the purpose of the following research activity to understand the potential and development of the Smart Working model in the Italian public sector in this first phase of experimentation in public administrations, especially at the level of Italian local administrations and decentralised administrations, where recently a collaboration process is starting to put together shared organizational practices.

The method of interviews proposed in the following research work as well as according to (Kvale, 1983) have been set following the following characteristics:

1. *A low degree of the structuring of the question submitted to the interviewee;*
2. *A preponderance of open questions;*

3. *A focus on specific and concrete situations, on action sequences that are attributable to the interviewee's world.*

In this research context, as it will be later highlighted in the conclusions, there is therefore no goal as a goal of exhaustiveness of social knowledge as that of producing a plausible interpretation (Barbour et al. 1999, Melucci, 1998) of the investigated phenomenon that seeks to account for the meaning attributed by social actors to the process of experimentation and implementation of the Smart Working model. Concerning the research object and the objectives outlined above, there in this paragraph, we will describe the main activity phases in which the investigation is divided. The time phase in which the research was conducted was 24 months, coinciding with a considerable part of the doctoral student research period.

Three phases closely connected have been on the base of this research activity.

- a. Firstly, the selection and background analysis conducted with the collection of documents, presentations in conference, report and normative to understand how the Italian public administrations and in specific, the Italian local administrations have begun to overlook the trial phase of the Smart Working model.
- b. A second phase involved the part of the empirical investigation carried out by conducting semi-structured interviews with public managers and civil servants of local and decentralised Italian public administrations to understand their actual knowledge of Smart Working and how they were facing the testing phase of this model in their administrations.



- c. A third and final phase covered the understanding of some issues, and the positive aspects emerged from the semi-structured interviews, identified during the processing of the results.

According to the first phase of the research, as previously written, the investigation activity allowed to examine during these 24 months the principal reports, documents, and agreement released by the Italian public administrations regarding the testing methods and trial phase of implementation of the Smart Working organizational model. For this purpose, the following table shows the number and types of documents taken in evidence (tab.3.1).

Tab 3.1

*Document analysed on introduction of Smart Working in Italian Public Sector*

<b><i>Id</i></b>	<b><i>Type of documents</i></b>	<b><i>Content</i></b>	<b><i>Year</i></b>
1	Italian Law	Law n. 124/2015 (art. 14) "Delegations to the Government regarding the reorganization of the public administrations"	2015
2	Italian Law	law n. 81/2017 (articles 18-24) "Measures for the protection of non-entrepreneurial self-employment and measures aimed at favouring flexible articulation in the times and places of subordinate work"	2017
3	Italian DPR	Presidency Directive of the Council of Ministers (PCM) n. 3/2017: "Directive of the President of the Council of Ministers containing guidelines for the implementation of paragraphs 1 and 2 of Article 14 of the Law of 7 August 2015, n. 124 and guidelines are containing rules concerning the organization of work aimed at promoting the work-life balance of employees".	2017
4	Italian State Tax Agency	Smart Working pilot project agreement in State Property Agency	2017

5	Italian Union Agreement	Union Agreement Smart Working pilot project in State Property	2017
6	Italian Report	Department for Equal Opportunities of the Presidency of the Council of Ministers - Office for Interventions on Equality and Equal Opportunities - based on the study "Teleworking, Smart Working, Co-working - Guidelines for the integrated planning of innovative conciliation measures and services "	2017
7	Municipality of Treviso	Regulation for the work performance in agile work modality (Smart Working)	2017
8	Italian Report	Analysis of the most significant experiences of agile work carried out at public and private level both nationally and internationally. Project "Agile work for the future of the PA" PON Governance and institutional capacity 2014/2020, Axis 1, Action 1.3.5	2018
9	Italian Report	Analysis of normative regulations for the application of “agile work” in the Public Administration Project “Agile work for the future of the PA” PON Governance and Institutional Capacity 2014 -2020, Axis 1, Action 1.3.5	2018
10	Municipality of Genova Regulation	Agile Work's regulation	2018
11	Italian Ministry of Economics and Finance Regulation	Annual determination for the definition of the personnel quote admitted to agile work and for the definition of exercisable activities in agile method	2019

12	Revenue Agency Union Trade Agreement	Smart Working employees' agreement in Revenue Agency	2019
13	INPS guidelines	Smart Working. Law 22 May 2017, n. 81. Directive n. 3/2017 of the Presidency of the Council of Ministers. Discipline and operating instructions to start trial phase	2019
14	Municipality of Cagliari Regulation	Regulation for the discipline of telework and agile work in the Municipality of Cagliari	2019
15	Municipality of Naples Regulation	Approval of the internal Notice to acquire a manifestation of interest of the Municipality of Naples' employees to be involved in the testing of Smart Working, in the achievement of the Municipal Council Resolution n. 562 of 11.29.2019.	2019

Starting from the careful analysis of this documentation, in the first phase, it was possible to define the regulatory framework in which the Smart Working organizational model developed in the Italian public administrations. This phase proved to be necessary since by analyzing the keywords on which the legislator and public managers have highlighted the most in the legislative and regulatory texts, it was possible to understand the dynamics that developed the process of organizational change.

The final phase of the research was conducted in two different periods (April - June 2018; April - June 2019).

The semi-structured interviews were conducted on the sidelines or in the breaks of a course of advanced training aimed at public managers and civil servants held at the Federico II University of Naples.

The decision to proceed with semi-structured interviews stems from the small sample of interviews identified. This choice of a small sample derives from the fact of wanting to carry out the research investigation exclusively on the Smart Working projects being tested.

In detail, the semi-structured interview provides a fixed and standard track for all subjects with the topics that must necessarily be addressed during the interview.

Only forty public managers and civil servants were interviewed. The choice fell on public managers and civil servants belonging to the public administrations where the Smart Working pilot project started or was about to start.

This choice was relevant for obtaining answers consistent with the research topic.

Another aspect that was taken into consideration in identifying the interviewees was that of identifying profiles that could be traced back to local administrations or peripheral structures of central administrations.

Public managers and civil servants of four different administrations at the local and decentralised level of Italian public administration were identified among those who were part of the potential interviewable subjects.

For this in-depth investigation was used a multiple case study technique, which is recommended as the most applicable according to the literature (Baxter & Jack 2008; Yin 2003a; Yin 2003b).

To develop this multiple case study, public managers and civil servants from four different local and decentralized public administrative realities were identified.

During the selection phase of the interviewees, managers and civil servants were identified at the beginning of the trial phase of the Smart Working model in a local municipality, one of the main ones in southern Italy.

In this local administration, the number of departments that have started a Smart Working trial phase is seven. (*administration A*).

The second group of public managers and civil servants has been identified in the local offices at the regional level of one of the Italian public administrations that deals with the social security benefits at civil servants. The public employees identified was of three decentralised department. (*administration B*).

The third group of public managers and civil servants for this research work in a regional tax agency in southern Italy. In this case was identified three regional decentralised department that have started the trial phase of Smart Working (*administration C*).

Finally, the fourth group of public managers and civil servants was identified in a territorial decentralised administration in the south of Italy of a Central Economics Department. In this public administration was identified three regional department that have started the trial phase of Smart Working. (*administration D*).

For each of the public administrations in which the subjects subsequently interviewed were identified, they adopted uniform processes to start the Smart Working trial phase. This is a crucial premise for understanding how the answers that have been provided by the participants in the interviews come from homogeneous regulatory frameworks for each administrative reality taken into consideration.

Finally, the respondents were identified so that they could have a sample distributed evenly between public managers and civil servants.

Table 3.2 shows the administration of each interviewee and their position in the public organization.

**Tab 3.2**

*Public employees interviewed for each of the administrations' choices for research.*

	<i>Public Administrations</i>	<i>Public Managers</i>	<i>Civil servants</i>
1	<i>Administration A</i>	5	5
2	<i>Administration B</i>	10	10
3	<i>Administration C</i>	5	5
4	<i>Administration D</i>	7	3
	<i>Total</i>	27	23

The last aspect that should be highlighted is the merit of choosing a sample of respondents distributed in public administrations at the local level.

The tool used in the semi-structured interview of a purely qualitative nature seeks to capture and deepen the most significant aspects concerning a specific research topic.

The Smart Working organizational model has significant impacts on the professional and personal life of civil servants, as well as on that of citizens.

To this end, it seemed relevant to understand the perceptions of Smart Working at a local level of Italian public administrations, since it can represent a litmus test to understand how the process of changing public organizations is proceeding with the introduction of Smart Working.

### **3.5 The impact on organizational processes of the Smart Working model in local and decentralised Italian public administrations: a civil servants' perspective**

To verify and to understand the implementation of Smart Working in this trial phase in Italian public administration, in this research work, it was decided to refer in the formulation of the semi-structured interviews' questions to three different aspects to answer the research questions previously highlighted (Appendix A).

The first part of the questionnaire concerned questions addressed to participants aimed at collecting some personal information, the administrations they belong to, and the years of service in the public administration.

The second part of the interviews concerned the impact that the technologies had on the organizations of the interviewees. These questions were addressed on the assumption that the implementation of Smart Working is not possible in organizations with significant technological gaps.



Moreover, as seen previously, Smart Working, unlike teleworking, involves the use of its own technological devices.

This aspect determines that the members of this project must be particularly trained on the use of the operational programs of the public administration in which they operate.

The third part of the interview covered some crucial aspects for the development of Smart Working in an organization.

Firstly, this research tried to understand if the interviewees thought it possible to develop this organizational model in their administrations.

This arises from the assumption that performing an activity in Smart Working means passing to an organizational model in which the result is the focus to follow. The temporal and physical presence aspects are missing, and this eliminates one of the classic elements of office activities.

The secondly aspect that this research tried to reflect was the personal and work relationships that a Smart Working model is going to change. One of the crucial factors of the Smart Working project is the *"responsibility agreement"* born between smart workers and public managers.

Public managers must grant much autonomy and make the officials responsible for obtaining the results expected by the organization.

The thirdly and final part of the interview questions structure concerned the impact that Smart Working can have on reconciling work life. We tried to deepen how, according to the interviewees, working in Smart Working can improve the quality of their life and if in general, they consider it a useful model to create better working conditions and personal life.

### **3.5.1 The relationship between civil servants and ICT tools**

According to Orlikowski and Gash (1994), the technology used is the result of the sense-making processes prevalent in organizations that lead to the formulation of precise technological frames. Technological frames are the assumptions, expectations, and knowledge that the organizational subjects have to understand the role and nature of technology concerning their organization and the performance of their activity. (De Vries et al.2016; Gold and al. 2001).

Furthermore, it is useful for workers to understand the specific applications and consequences that technology will produce within an organization.

One of the characteristics transpired from the interviews is the technological adaptation of the administrations.

Almost all of the civil servants and public managers interviewed consider that the technological devices made available by their public organization are adequate for the Smart Working methods. Furthermore, the interviewees believe that their own technological tools are also suitable for the activities they will have to carry out in smart working.

This aspect is especially relevant to take into consideration because the use of its own technological devices is one of the accessory elements of operating in Smart Working mode.

A further aspect that needs to be highlighted concerns the central role of technologies in modern organizations from a motivational point of view.

According to Kvaløy and Schöttner (2015), a technological approach in organizations and a correct and coherent use of technologies in organizations creates an effect not only of technical support to the worker in performing his performance to the best professionals but also to motivate him in achieving personal goals and organization even more than economic incentives.

Some civil servants' answers that have been given are particularly interesting: for example, one of the interviewees stated that:

- *"ICT devices have allowed us to improve the entire work process, accelerating our way of performing work activities. Today, also thanks to ICT technologies, we can carry out our activity more quickly and effectively, and this makes us particularly happy and functional in the workplace." (Civil Servant - administration D)*

A public manager of Municipality says:

- *"Working in Smart Working is undoubtedly a way to manage the flow of information we have and to achieve the objectives set by the Administration more effectively, in detail, those that our managers put to us. This result is also possible for the use of the technologies that the Administration has already provided us with." (Public manager - administration A)*

From the answers obtained, we can state how technologies cannot, in any way, be an irrelevant element in today's organizational planning. Create the conditions to imagine ever more significant improvements, shaping the organizational culture.

In the context of the relational dynamics between technology and the organizational model (Martinez, 2004), the role that public decision-makers have in quickly identifying technological changes is a particularly important element for respondents.

The public managers interviewed all underlined how public administrations are making a significant effort to adapt to technological changes. One of this affirm that:

- *"Technologies have entirely changed the way work is organized in my administration. I am pleased that the administration to which I belong has always been sensitive to this point, promoting essential and exciting changes compared to other organizational entities in the public sector. "* (public manager - administration B)

However, the interviews revealed further aspects that deserve reflection on the role of technologies within organizations and the impact that technologies have on the design of Smart Working activities.

One of the critical aspects that emerged from some interviews concerns the possibility that the start of a Smart Working pilot project in the organization may create conditions of isolation concerning the workgroup. One of the interviewees, a civil servant of a decentralised administration of Italian Economics Department starting to apply a Smart Working local pilot project, says:

- *"The risk that I see is not so much the achievement of the result that is linked to aspects of responsibility that an official must possess and that accepts the challenge of working in a new way in his organization. I believe, instead, that the complete entrustment technology can lead to an effect of isolation and distancing from office dynamics When human activities are lacking in the*

*execution of their work, but also the possibility of rigorously dealing with specific problems, part of how I intend to perform is missing. work activity: technologies can hardly replace a one-to-one activity.” (civil servant - administration D)*

The issue of managing relational aspects with colleagues, therefore, becomes a non-secondary element and must be taken into consideration when carrying out Smart Working projects in public administrations.

Technologies make it possible to create new conditions ever to work at a distance or to use spaces that are not found in one's structure. However, as described above, if the technologies are seen as a positive aspect to have greater personal responsibility, for some interviewers, technologies nothing more than an element of detachment from the daily reality of the office.

Another critical element that is highlighted in some of the interviews is the aspect of data protection and privacy.

On this issue, the interviewees who highlighted this aspect underlined how high competence in the use of digital tools is needed to avoid that they could be critical concerning sensitive data. To this end, many urge the training aspect to update the use of digital media as an element of personal growth and development of the Smart Working organizational model.

In the law 81/2017, there are no specific details regarding the subject of data protection and custody and the confidentiality that must be read in a dual aspect. On one side of the civil servants' protection, as a limit to the exercise of control powers by the employer.

On the other hand, as a civil servants' contractual obligation of diligence and loyalty obligations.

### **3.5.2 Smart Working: a trust-based organizational model?**

As has been argued in the previous chapters, Smart Working is an organizational model based on the achievement of objectives, to improve the effectiveness and efficiency of a public administration.

The objectives' achievement it is not tied to a job performance to be performed exclusively in the office, but also in different and flexible ways by place and time (Brewster, 1998).

Therefore, the Smart Working necessarily implies that In an organization, due to the characteristics of this organizational model, trust-based relationships between public managers and civil servants are favoured. This aspect is underlined in the absence of physical control over the work performed in the public administrations.

The topic of trust in organizations is of considerable interest in organizational studies. According to Williams (2012) Zeffane et al. (2003), Morrison and Phelps, (1999); and Kitchell, (1995) one of the main critical factors recognized for improving organizational performance is trust in the workplace.

From this point of view, the leadership styles of the managers depict an essential variable to enhance a Smart Working model within an organization validly.

The topic of leadership, therefore, is intertwined with the promotion of an efficient context-oriented organizational culture. According to Wang et al. (2011), the leadership

aimed at worker relations (relationship-oriented) presents an indirect positive relationship with performance, mediated by the organizational culture already present in the organization itself.

In general, it is, therefore, possible to assume that, in order to fully realize the Smart Working in the public administration, it is necessary to overcome an exclusively "task-oriented" leadership in which public managers concentrate exclusively on the need to end the work activity.

On the opposing, it is essential to mitigate this style of leadership to give more space to that "relationship-oriented" in which public managers give importance to relations with other members of the organization during the execution of the task.

The topic of participatory involvement of the public manager is highlighted in the interviews.

Some of the public managers' interviews have specified how, in a Smart Working pilot project, the modality of carrying out their role is central.

In detail, for one of public manager the emotional involvement is a condition to create: *"strong responsibility for those who are performing work performance in this mode of Smart Working."* (public manager - administration B)

In another of the interviews carried out, it is highlighted how for a public manager to work in a Smart Working modality represents the consolidation of a style of work that has already implicitly spread within its administrations.

- *"I would not change much my way of doing the activity I already do. I always try to be oriented to the individual and his needs".* (public manager - administration B)

A way of working that the public managers interviewed see as also consolidated in the relationship with the civil servants:

- *"In the public management- civil servants' relationship, I believe that there are already consolidated relational situations, so I do not believe that Smart Working can lead to a deterioration of relations, but rather facilitate them given achieving the objectives." (Public manager- administration C)*

Another aspect that is interesting and that emerges from the interviews is that concerning the sharing and transparency of information on the strategy, values, objectives, and performance of the organization at all organizational levels. This expectation is strongly connected to the role that the public manager must assume, based on approaches more oriented to delegation and to empowering people, defining the priorities and objectives to be achieved collaboratively, identifying the indicators necessary to measure the performance and results of the work, obtained both at the individual level and the level of the area or workgroup.

As already highlighted above, the transition from a traditional organizational model to the Smart Working model has the other significant fact of having public organizations designed and organized to achieve results. The public administrations must identify, during the trial phase of the Smart Working. Subsequently, in the various stages of progress, some indicators that allow understanding the productivity and quality of the work performed and, consequently, also as the impact of the Smart Working at the level of citizen services.

This aspect has been highlighted several times in interviews:



- *"Smart Working helps to achieve a results-based approach to administration Performance certainly improves with greater flexibility. "First of all, it is necessary to pay attention to the quality of the results achieved by those who work in Smart Working." (Public manager - administration A)*
- *"Smart Working will surely positively affect both the quantity and the quality of the activities to be carried out, and it would allow the workers to carry out their activity in a more concentrated way and facilitate how the work is carried out." (Civil servant- administration A)*

It is, therefore, possible to affirm that to consolidate the transition through an organizational model based on trust, as stated by one of the civil servants interviewed:

- *"We must be aware that we all have the same goal, the well-being of the organization both in daily life and in the future." (Civil servant - administration B)*

Being a Smart Worker and having the support of management is certainly more motivating than being alone in implementing innovation. Smart Working model is a process of change in which everyone can feel involved in achieving goals and activities. Precisely for this reason, the public manager's attitude must be to support work activities in three ways: In one of the interviews, a public manager says that:

- *"Much of the success of Smart Working depends on the public manager as a promoter of change. If the manager makes resistance, it can hardly become feasible in the public administration." (public manager - administration A)*

In the interview, moreover, the public manager underlines the topic of the agreement to be signed with civil servants, which highlights as a fundamental element of this organizational change.

- *"The public manager has another crucial role, that of understanding and indicating in the agreement to be stipulated with the official those that can be achievable targets by employees working in Smart Working. This aspect is advantageous for me to facilitate the trial phase to the civil servants who begin to become familiar with this new way of performing work performance ". (Public manager - administration A)*

However, not only positive aspects were highlighted. From the interviews, some critical points emerged that it is relevant to highlight.

First, the concept of responsibility, which is closely connected to the individual's desire to feel empowered. Some civil servant's interviews have focused on individual behaviours that can be difficult to change:

- *"Feeling responsible for achieving a goal is something outside of Smart Working and comes from the way you feel you are part of an organization." (Civil servant - administration D)*
- *"Everything is in the hands of individuals who must feel empowered by the degree of autonomy they can use." (Civil servant- administration C)*
- *"Physical absence from the workplace can lead to risks such as that of a negative impact on work in terms of urgency to achieve the objectives." (Civil servant - administration B)*

- *"The physical distance can be an element that can negatively influence the evaluation by the public manager, and there is the risk of not having the perception by the public official of what is being done within the organization."*  
(Civil servant - administration C)

Furthermore, in a trust-based organizational model, particular attention must be paid to the training's topic

Training is essential because it allows all public employees to be in line with changes in organizational policies.

Intending to develop Smart Working, it emerged from the interviews conducted as this subject is particularly present. In some statements that have been issued by the participants in the interviews, the training aspect should be understood transversally, and that should concern not only the aspect of technical knowledge but also the development of skills in order to improve one's ability to share strategies, values, and objectives of the organization at all levels.

This formative activity allows the organizational subjects to be focused on the change that is taking place in the organizational structures with an increase in the sense of participation and mutual trust in the work that is taking place.

One of the interviewees emphasizes how:

- *"The role of the public manager certainly changes because it must surely be oriented towards greater delegation and empowerment of people by defining the priorities and objectives to be achieved collaboratively."* (Public manager - administration A)

- *"Training is necessary; in my opinion, if we want to effectively activate the experimentation of Smart Working because only in this way, it is possible to become aware of the organizational advantages. In our administration is starting an e-learning training course that will allow all employees to have clear goals for Smart Working. "* (civil servant - administration C)
- *"I believe it is essential to train public managers in managing Smart Working, making them aware of how our role is decisive in transforming the organization and making the transition to a different organizational model easier"* (Public manager - administration B)
- *"In my administration, a trial phase of the Smart Working modalities has not yet begun, but I consider it a great advantage because it would allow us to effectively improve the achievement of the objectives we have to achieve."* (Civil servant - administration D)
- *"Training becomes fundamental if we want to go beyond the Smart Working pilot phase because it would make everyone more aware and informed about their autonomy in carrying out Smart Working activities."* (civil servant-administration C)

Attention to training activities is therefore emphasized in the interviews, and it must concern not only technical aspects but also managerial ones.

This aspect must be underlined with particular interest because it highlights how, in the public administration, there is particular interest in wanting to undertake training courses that increase managerial skills.

According to Borgonovi (2018), attention and investing in managerial training are fundamental if we want to encourage the renewal of the public administration, integrating technical training, as well as this has been done positively in the private sector.

As previously described, smart working requires public governance by public managers, connecting organizational policies, digital technologies and redesign of physical workspaces.

The redefinition of the physical spaces was highlighted in the interviews as an element of change from a point of view of redefining the offices. A public manager says:

- *"In my unit, there are four employees who have asked to be able to carry out their work in Smart Working. For me, it is an excellent opportunity because it allows me from a practical point of view to reorganize the spaces, allowing the newly hired to be able to have workspaces that can be shared with others. "* (Public manager - administration A)

The continuous evolution of technology, therefore, has allowed a different way of using the spaces of use in public places. Connected to the role of the public manager there is also the activity aimed at redefining workspaces. According to Myerson and Bichard (2016) the workspace is no longer connected to the concept of a traditional office, but a dynamic place where public managers have the task to encourage:

- *"the cooperation and communication between workers and to enhance their ability to concentrate, generating new relationships. "* (Public manager - administration B)

### 3.5.3 Smart Working and civil servants' work-life balance

Starting a pilot project of the Smart-working model in the Public Administration means developing a real plan of redefining an organizational model that leads to a cultural change in which individual well-being is a fundamental part of organizational well-being.

As we have already highlighted above, the debate on the spread of organizational well-being in organizations and in the public sector, in detail, has grown in recent years (Li et al. 2010; Morrison, 2011; Janssen et al. 2004; Janssen, 2000).

Analysing the interviews with public officials and managers of administrations in the pilot phase of Smart-Working, it is particularly highlighted how public organizations should be places of well-being and family-friendly (Saltzstein et al. 2001).

In detail, both public managers and civil servants have a potential benefit in reconciling their working and personal life.

In one of the interviews, it is highlighted how:

- *"Working in Smart Working is an opportunity for everyone because it allows, based on one's age, to satisfy the personal needs that a person faces in a given period of his life. " (civil servant - administration C)*

According to Golden (2001), work autonomy through the introduction of personalized work schedules is an excellent opportunity for workers to accept the challenges of change in their organization, including by improving individual health conditions. This aspect is highlighted in some of the public employees' interviews which state that:

- *"I applied to work in Smart Working mode because I could finally organize a few days of the week when I need to be closer to my children." (Civil servant - administration D)*
- *"I applied for the smart work pilot project also for the opportunity to gain from the temporal flexibility also from the economic point of view, not only of health." (Civil servant administration A)*
- *"Avery at flexible times allows me to be able at this moment in which I have small children to be able to dedicate myself to them, but at the same time always feel operative in my administration. (civil servant - administration B)*
- *"Absolutely yes! In my organizational reality, for example, two public employees work in a co-working model that required them to execute the agile way of working precisely in order to have greater flexibility regarding their daily life commitments." (Civil servant - administration C)*
- *"The treatment of specific work practices can take place anywhere, and this does nothing but facilitates the relationship a person has with his life." (Civil servant administration D)*

Furthermore, another aspect that should not be underestimated in organizations is the connection between work-life balance and organizational results.

In the definition of the Smart Working, the workers' needs are the strategic starting assumption on which the project that connects with the needs of an organization to achieve results in terms of output rests (Jeyasingham, 2016; Beauregard and Henry 2009). In one of the interviews carried out this aspect emerges that:

- *"For a public manager, flexibility becomes a consolidation of how his job performance is performed, which already, many times, takes place at different times than expected. Flexibility is just another way of imagining an organization in a more effective way of achieving the objectives that are required of us."*  
(Public manager administration B)

However, not always performing flexible work performance can lead to benefits in the medium to long term.

According to Allen et al. (2015) and Shockley et al. (2007), the performance of distance work can have a marginal impact on the decrease in the work-family contrast.

This limited impact seems to be since the family responsibilities of an agile worker can grow as a result of the change in lifestyle that inevitably leads to having more time to devote to his family. The effect, therefore, is that Smart Working can, on the one hand, diminish the conflict that is created between the workplace and the family context, but, on the other, it can increase the conflict between family and work.

Although this is an aspect that can be marginal, there are traces in some interviews carried out during this research work. For example, one of the interviewees highlighted how:

- *"performing my work in the office I find stimulating and does not impact negatively on my relationship with the family, on the contrary, carrying out the work activity in this way I feel more empowered in the compared to everyone, and I do not feel the burden of not having extra time at home. This aspect is one of the reasons why I would hardly apply for entry into the Smart Working pilot programs. "* (Civil servant - administration B)



Smart Working model is a flexible organizational model that increases the growth of the well-being of the worker with a direct effect of the reconciliation of lifetimes.

Another theme that is highlighted in the interviews is the reduction of stress risks related to work performance.

However, some lateral aspects that individuals may have to face in successive phases of implementation should not be underestimated.

### **3.6 Final Remarks**

Smart Working model is an exciting organizational development modality for the Public Administration with great potential for realization. Starting from the analysis of the interviews carried out in the following research, it is possible to identify a difference between the impact that the Smart Working has on individuals and what it has on the organization (Tiraboschi, 2017).

As it was possible to highlight in the research work previously exposed, the Smart Working aims to modify some traditional organizational assumptions thanks to the support of new technologies able to meet the needs of both the organization itself and those who work within organizations. Starting from the analysis of the interviews carried out, it is possible to identify some relationships with the topics set in the previous theoretical chapters.

All respondents responding to the questions asked about how technologies have changed their membership organizations have provided positive answers, highlighting how technologies have simplified processes and improved collaboration processes. The new

technologies have allowed an increasingly more significant exchange of information flows, which, as evidenced by some parts of interviews proposed in the paragraph concerning the role of technologies, have speeded up the processing of the practices, the overcoming of the critical points present in some organizational processes. This positive perception of the role of technologies is relevant because it represents a significant crossroads in understanding the real possibilities of implementing Smart Working.

Working physically away from one's office means not only having functional and up-to-date technological devices but also having an organizational structure capable of supporting the continuous updates necessary for the proper functioning of technologies. Another aspect that the interviews have highlighted is the positive perception of how this new organizational model can consolidate the empowerment of workers.

A functional model of Smart Working, as previously described, requires a profound synergy between management and officials in order to carry out the activities for which they are responding effectively.

In the interviews, it is positive to be able to work autonomously and be able to make effective decisions to achieve the objectives on which will be evaluated.

The topic of responsibility is closely related to that of the personalization of the way of performing work. In the interviews, it was possible to highlight the positive aspect of this new way of understanding work performance that integrates the needs of the organization with those of the worker to enhance skills.

The term that most emerged during the interviews is "collaboration". Smart Working, as an organizational model, focuses precisely on the use of collaboration as the main coordination tool.

However, the results of the interviews have also highlighted a particularly critical aspect that must be considered: the physical presence in the office, although it can be seen as a traditional way of performing work performance; for some interviewers, it represents a moment of sharing of one's own professional experiences. The concern that emerges is that of not being able to have a one-to-one comparison with colleagues on specific critical issues and work emergencies of the moment that would be overcome if physically present at that particular time.

The desire to start Smart Working testing in organizations is, therefore, part of the actions undertaken to promote greater efficiency in public administration.

The public administrations' efficiency cannot be considered unrelated to the promotion of the work-life balance that must be protected in the organizations precisely to allow the well-being of the individual to be reflected in the organizations (Sulea et al.2012).

Work organization methods in Smart Working allow the employees to perform the performance outside the scheduled time and place, allow to increase the effectiveness and efficiency of the work performance through the use of digital tools, as well as to enable contribute in a more profitable way to supporting the innovative drive of your organization, through the development of new ideas, participation in the definition of new processes, new products or new services. From the interviews, it is possible to have an overview of the topic of the responsibility of civil servants to the achievement of the objectives set by the administrations.

In conclusion, it is possible to assert that the work carried out in Smart Working mode is seen as an opportunity to increase the autonomy of the civil servants to complete the

objectives more efficiently, even with an increase in his professionalism and to highlight the own individual skills.

On a personal level, Smart Working reduces work stress and allows persons to recover time to dedicate to the family organization. However, an aspect that emerged from the interviews carried out, and that deserves more excellent reflection, and future analysis concerns the risk of eliminating the barriers between private and professional life.

**Tab 3.3**

***Advantages and Weakness of Smart Working in the Italian public managers and civil servants' perception***

<b><i>Smart Workin Topics</i></b>	<b><i>Advantages</i></b>	<b><i>Weakness</i></b>
<b><i>Information &amp; Communication Technologies</i></b>	<ul style="list-style-type: none"> <li>- Acceleration of work activities' execution</li> <li>- More effective work performance</li> <li>- More efficient citizen services</li> <li>- Improvement of internal organizational processes</li> <li>- cost reduction for physical workspaces</li> <li>- Reduction of the closing times of the processed paperwork</li> </ul>	<ul style="list-style-type: none"> <li>- Privacy problems</li> <li>- regularly updated knowledge on new technologies</li> </ul>
<b><i>Human Resources Management</i></b>	<ul style="list-style-type: none"> <li>- Rationalization of organizational processes</li> <li>- Improving individual performance</li> <li>- Greater possibility of collaboration between public managers and civil servants</li> <li>- Reorganize workspaces in sharing mode</li> </ul>	<ul style="list-style-type: none"> <li>- risk of isolation from other colleagues</li> <li>- risk of losing the sense of community</li> <li>- Risks of limited collaboration and integration with other colleagues</li> <li>- Mismatch between goals and results</li> </ul>

	<ul style="list-style-type: none"> <li>- <b>More developed relationship between public employees and organization</b></li> </ul>	
<i>Work life balance</i>	<ul style="list-style-type: none"> <li>- <b>Stress reduction</b></li> <li>- <b>More chance of being with children</b></li> <li>- <b>More attention to their health</b></li> <li>- <b>Reduction of costs for home-office travel</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>More distractions</b></li> <li>- <b>confusion between personal and professional life</b></li> </ul>

### **3.7 Research limits and future implications**

The limits of the following research can be found primarily in the adopted methodology. The adoption of semi-structured interviews if on the one hand allows to define in advance the objectives to which it is intended to arrive and be positive concerning the interactions on specific topics to be explored, on the one hand, critical issues may arise in terms of emotional participation and truthfulness of what has been said.

Secondly, the sample was chosen, although part of the administrations that are starting or have started the introduction of the Smart Working pilot project can provide a preliminary and non-exhaustive reading of the Smart Working phenomenon.

Possible future developments for this research are certainly to be found in the extension of the reference sample by expanding the research to other administrations in which they are experimenting with organizational paths based on Smart Working.

From specific issues that may be more in-depth by future research, these aspects may be interesting:

- The topic of the right to disconnection, which, in the interviews, was a critical issue concerning the uses of technologies in organizations.
- The topic of responsibility connected to the relationship between managers and public servants, which represents the central nucleus around which a practical introduction of Smart Working revolves in both public and private organizations.
- The topic related to the political choices that can be taken to speed up the diffusion in the public administrations of Smart Working. The speed with which technologies change and how these affect the relationships between individuals and organizations can

undoubtedly change organizational scenarios in the short term, making the regulations introduced in 2017 already obsolete.

### **3.8 Conclusions**

Changing organizations represents a constant challenge for public organizations that need to respond promptly to the continuous challenges facing contemporary society.

These changes are made more and more difficult by the constant demands placed on the subjects who are part of them.

According to Canonico and Tomo (2018)<sup>4</sup>, the topics of flexibility, adaptation, innovation, and personalization are now inherent in the academic and managerial debate to which public organizations are called to provide answers.

Changing an organization means imagining new organizational approaches. In the public sector, a new way of organizing the planning and performance of work performance has come up that takes the name of smart working.

Smart Working model is a new managerial approach to the work capable of overcoming the format of performance linked to a location and times and of offering space to a managerial culture that funds the pursuit of objectives and, therefore, measures the performance on the results rather than on the number of hours worked or processes taken care.

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<sup>4</sup> Canonico P., Tomo A. (2018) Le nuove sfide della Pubblica Amministrazione tra performance e controllo in *Cambiamento e complessità nella pubblica amministrazione: Ruoli, risorse e trasparenza*. (a cura di) Hinna, A., Mangia, G., Mameli, S., Tomo, A., Milano, EGEA,



Working smarter, therefore, consists of a work performance that differs from that tradition in that it is carried out partly inside and partly outside public offices and only within the limits of maximum duration of daily working hours and weekly, deriving from the law, from collective bargaining and the stipulation of a working agreement between public managers and smart workers.

Firstly, regards the performance of work activities through technological tools that ensure greater flexibility in work processes and allow workers to operate asynchronously.

Secondly, regards the relational topic between managers and civil servants. The activity in smart working represents a change in the relationship codes between people, in which the concept of trust represents a central element for achieving an organizational model of smart working accomplished.

In the Italian public administration, the Smart Working was introduced with a particularly innovative discipline that represents an exciting model also for other European public administrations. With the law 81/2017 and the Legislative Decree 3/2017, the Italian legislator has put in place the regulatory constraints to which Italian public administrations must refer. Progressively, both central and local administrations, tax agencies, and social security institutions are opening up to this new organizational model.

The following research work sought to understand the perception that public managers and civil servants of Italian administrations have of this new organizational model and of this new way of understanding relationships and the performance of work performance.

For the research activity on smart working, forty of the executives and public officials belonging to central administrations of central public administrations, local administrations, and local structures of the social security institutions of the State where projects are starting or have just started are interviewed. Smart Working pilot.

To carry out an organizational model, Smart Working, the executives and public officials interviewed highlighted some fundamental dimensions: autonomy and responsibility; the shift of focus from presence to achievement of the result; the diffusion of a culture based on trust and not on control; the need for participatory leadership; a more excellent aptitude for the use of digital tools; more considerable attention to the use of space and greater attention to work-life balance.

Regarding the principles of autonomy and responsibility, the interviewees highlighted how working outside the traditional office spaces requires strong organizational skills, goal-orientation, and results, problem-solving and concentration skills, or being easy prey to distractions in the case of unique environments.

This greater autonomy and greater responsibility require, as has been highlighted, the creation and sharing of a trust-based organizational model. The public manager is asked for shared and participatory leadership, attentive to the skills of individuals. The public manager has the task of supporting, through a model based on the feedback of improvement and recognition, the performances (objectively unequivocal) and the behaviours of his own team through an organizational culture based on trust.

Trust becomes an essential element in relationships in a public structure and becomes the badge of new work models, which must increasingly adapt to the continuous changes of the modern competitive context.

Performing work performance in Smart Working means having solid computer skills to be able to track and report on your work and, in this way, to make services consistent with the organization's needs for results. However, the relationship with technologies and with the digitization of a public organization highlights critical aspects concerning the issue of privacy and the right to disconnect, so that it does not lead to a distortion of work performance that goes beyond those that are the scheduled hours, transforming flexibility into uninterrupted work performance, paradoxically reducing the work-life balance spaces.

The figure of the public manager is indispensable because it is the fulcrum of the innovative initiative, emphasizing the sense of belonging, making people feel part of a community, putting aside the hierarchical relationship. A leadership, therefore, that, feeling the need to direct its action towards the achievement of objectives, disposing of the parameters of time and presence, artificially used for the measurement of performance, invests in the processes of delegation, expanding autonomy and individual responsibility.

From the interviews carried out, it emerges that one of the central and transversal themes to all the elements previously analysed for the implementation of smart working concerns cultural change.

Acquiring new technologies, reorganizing the spaces of workstations in a non-traditional way alone is not sufficient to spread trust and full recognition of responsibility. Care must, therefore, be taken in workers to be responsible for the result, capable of producing effects, compared to the growing need to satisfy the demands of reconciling life and work times, in the spirit of the "work-life balance." To achieve these

goals it is essential, on the one hand, to foster the spirit of collaboration with the enhancement of skills and, on the other, to guarantee access to tools and technological systems that ensure the maximum sharing of information and the transmission of the communications needed to raise the performance of people at work.

The analysis presented leads to support the need for a secure connection with training, as highlighted in the interviews.

It is possible to experiment with Smart Working and make it useful if supported by specific training courses, which involve all levels of the organization, aimed at increasing the confidence pact between managers and officers. Furthermore, training becomes an opportunity to spread/expand the use of new technologies useful, above all, to increase and accelerate the process of acquiring autonomy.

All aspects specified in the following conclusions to the research work focus on a dynamic modernization of the public administration. As highlighted by Carrieri (2018), the new processes of organizational change arise with the idea of redefining the public sector as a driving force for the modernization of the country. In this sense, Smart Working can be seen as an organizational model capable of linking managerial and technical skills, capable of being the driving force behind changes in society.

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## *Appendix A*

### *The questionnaire*

The following questionnaire was performed to support the identification of Smart Working initiatives in the public sector and the perception of the impact of this organizational model.

### **"QUESTIONNAIRE FOR THE ASSESSMENT OF THE SMART WORKING MODEL IN PUBLIC SECTOR - LOCAL ADMINISTRATIONS"**

Dear Mr./Mrs.

this questionnaire was created to understand and to define the implementation process of the "Smart Working" model in the Public Sector.

The questionnaire is divided into two parts: a first part is intended to collect socio-demographic information, the second part, instead, is aimed at investigating individual perceptions regarding this model.

For this research project it is very important to be able to get in touch with the reality of its public administration.

The questionnaire is anonymous.

Best Regards!

A) First part - Personal information

1) ☐ Manager ☐ Officer

2) Title of Study:

☐ Bachelor ☐ Master's Degree. ☐ Other

3) Age:

☐ 20-25. ☐ 26-35. ☐ 36-45 ☐ 46-55. ☐ > 55

4) Sex: ☐ M. ☐ F

5) children:

☐ Yes, one. ☐ Yes, more than one ☐ no

B) TECHNOLOGIES IN ORGANIZATIONS:

6. To what extent do you think digital technologies are changing the public sector?

7. How much has digital trends impacted on your structure?

#### C) TARGETS, TRUST-BASED RELATIONSHIPS AND IMPLEMENTATION OF SMART WORKING

8. Are you aware that in your Public Administration it is possible to perform at work with Smart Working? Has it ever been submitted to your attention as a possible way of carrying out your work?

9. Have you ever performed your job in a smart working way? If not, what would be the prevailing motivations that would push you to take a Smart Working path?

10. What are the biggest obstacles to the introduction of Smart Working in your organization?

11. Have you ever taken any courses in your Public Administration concerning how Smart Working is done?

12. Do you believe that the adoption of this working method may be useful in order to improve the performance and organizational processes of your Public Administration?

13. Do you think this public administration reform project is easily implemented within your administration?

14. At what stage is the Smart Working project currently in your administration?

#### D) WORK-LIFE BALANCE AND SMART WORKING

15. Do you believe that Smart Working can positively influence the work-life balance?

## **Appendix B**

*Table of european report and laws analyzed of Smart Working in Public Sector*

<b><i>ID</i></b>	<b><i>Type of text</i></b>	<b><i>Contents</i></b>	<b><i>Year</i></b>
1	UK Government Report	“Working without walls”. An insight into the transforming government workplace	2004
2	UK Government Report	“Working beyond walls”. The government workplace as an agent of change	2008
3	UK Law	Flexible Working Regulation	2016
4	Netherlands Law	Flexible Working Act	2016
5	European Union Report	New Way of Working in Public Administration - Austrian Presidency of the Council of the European Union	2018
6	Netherlands Government Report	Working for the public good - Strategic government human resources policy 2025	2018
7	Ireland Government Report	Future Jobs Ireland	2019
8	European Union Report	Digital Economy and Society Index Report 2019 - Integration of Digital Technology	2019
9	European Union Report	Human Capital Digital Inclusion and Skills	2019