Università degli Studi di Padova

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HYBRID JOBS AND REDESIGNING OF THE WORKPLACE
LITERATURE AND EMPIRICAL REVIEW

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To hobbies and passions, to every little thing
that adds flavor to life;
To all the things to come

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Firma

Rossella Laporta

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INTRODUCTION & SUMMARY

The purpose of this dissertation is to analyse the change in the workforce and in the workplace, brought by the change in the surrounding environment. We live in a time where the prolongation of the professional life leaves firms to face four different types of generations. It is something fairly new for companies, which have never faced such diversity before the current times. In addition to the postponement of the retiring age, companies are also facing the new digital transformation, which has been permeating every aspect of our life. These changes cause tensions inside the companies. Our aim is to manage the generational co-existence.

In the first chapter, *Digital Transformation and Labour Market*, we analyse how the labour market is changing. The main focus of the chapter is on the digital transformation and its effects on the labour market and companies. Digital transformation, a phenomenon which is bringing new technologies into the companies, is making firms shift from an older, more traditional approach to performing activities, to a new, advanced way of dealing with work. Hence, some traditional jobs are disappearing, while other new jobs and professional figures are emerging. Many jobs are also shifting towards more digital roles: hybrid jobs are getting more and more established with each passing day.

The second chapter, *Shaping Organizations for Hybrid Jobs*, shifts focus from the labour market to the organization of firms. Hierarchical organizations, typical of traditional firms, are disappearing. New organizational structures are slowly taking their place: structures which are more flexible, more receptive towards market changes, and truly value

digital technologies. We analyse the Agile organizational structure, the Holacracy organizational structure, and the Ambidextrous business orientation.

The third chapter, *Why Generations Matter*, is focused on the four different generations that are currently existing inside the same organization. Baby Boomers, Generation X, Generation Y (or Millennials) and Generation Z all live inside the same firm. Companies shifted from having two cohorts of workers, who mostly showed the same, or very similar, types of behaviours, to having half a century worth of generations trying to co-exist.

The fourth chapter, *How to Manage Generational Co-Existence*, is focused on trying to solve the conflict and tensions between generations. The attention is focused on three different aspects of this co-existence: the managerial aspect, the organizational aspect and the performance aspect. We analyse the positive aspects of mentoring and reverse mentoring, then we analyse the performance measurement systems of hierarchical organizations and Agile organizations.

DIGITAL TRANSFORMATION AND LABOUR MARKET

1.1 Introduction

Hybrid jobs are on the rise. This the title of one article written by A. Fisher on WeForum in 2019. Digital transformation is the phenomenon which is bringing technology to the company. It is shifting the labour market on its axis: research done by Burning Glass shows that traditional jobs are disappearing, while other types of jobs are born, and some others are evolving into something else. We can talk about digitalization of our everyday life since the advent of the World Wide Web and in particular the public accessibility of the WWW to the general public, in 1993.

The specific term *digital transformation* is mainly related to the beginning of the second decade of the 21st century: for instance, in 2011 the sale of digitalized books surpasses the sale of printed books. This starts to show how the culture around us was starting to change and evolve, a change that would soon be an important part of the organization of firms and the carrying out of certain types of jobs or tasks. Starting from there, the digital transformation is a more and more widespread concept, one which every firm has to deal with, in order to keep up with the market and the technological and social transformation that are happening all around the world. Streaming services overtake analogic, hard copies of movies and music, and suddenly old-time jobs such as working in video stores or music stores get outshone by Netflix and Spotify technicians. Similarly, with the advent of digitalization and digital technologies, hard-copies archives are getting replaced by online clouds and digital archives. Following the same path, old jobs which simply required the knowledge of the sector and market they operated in, become in need of other kind of competences, like statistical and data analysis competences. The article by A. Fisher, based on the Burning Glass research, highlights that hybrid jobs are becoming the

future of the firms. They resist automation: this is the strongest advantage a type of job can have, in a world where digitalization and digital technologies are becoming more and more prevalent, giving birth to the most important transformation firms are undergoing. 42% of all jobs are going to get replaced by technology, whereas only 12% of hybrid jobs could be replaced by technology, since they rely heavily on "soft" skills like empathy and imagination (Fischer, 2019).

The first chapter of this dissertation deals with the digital transformation and its effects on the labour market and companies. Digital transformation, a phenomenon which is bringing new technologies into the companies, is making firms shift from an older, more traditional approach to performing activities, to a new, advanced way of dealing with work. The first chapter is organized as follows. The second paragraph talks about the digital transformation. After a definition, we analyse the digital workforce and the new competences it is tacitly requested to have. The third paragraph refers to the way the labour market is changing: we analyse the principal drivers of the digital transformation: these variables have been shaping the labour market in the recent years. The fourth paragraph illustrates jobs which have been fading, thanks to the digital transformation; the fifth, jobs which have been rising, thanks to the digital transformation. The sixth paragraph introduces hybrid jobs, pointing out some of their advantages and disadvantages.

1.2 What Digital Transformation is

It is the point of this dissertation to analyse the digital transformation in relation to the working environment. Digital Transformation (or DT) is the process of using digital technologies to create new – or modify – business processes, culture, and customer experiences to meet changing business and market requirements. This reimagining of business in the digital age is digital transformation (Salesforce, What is Digital Transformation).

The DT is a phenomenon which embodies the 21st century: it is a process almost every company is undergoing, and even the most traditional businesses are slowly shifting towards a more digital approach. DT is about adopting disruptive technologies to increase productivity, value creation, and the social welfare (Duarte and Ebert, 2018). It comes from the combined effects of several digital innovations bringing about novel actors, structures, practices, values, and beliefs that change, threaten, replace or complement existing rules of the game within organizations, ecosystems, industries or fields (Gegenhuberb, Greenwood and Hinings, 2018). Each of these novel components are linked with

disruptive technologies: new practices and structures come into play after being affected by technologies, such as the transformation of traditional jobs into hybrid jobs, and the transformation of the traditional workplace. Practices and values are affected by technologies as well: the labour market is more attentive to digital technologies and their social and environmental impact, it is developing new competences in order not to fall behind, and the culture of the firm is shifting towards a more digital and inclusive culture.

As DT is the most important transformation of the labour market of the recent years, there is not a perfect match between supply and demand of digital jobs yet. There is a mismatch between the two, as firms are gradually shifting from analogic to digital, and are changing their perspective on how to do business. They are not quite there yet: it is an important – and therefore slow – change, and digital transformation is a relatively recent phenomenon. What is needed to reduce the gap between offer and demand of digital competences are an increasing number of experts, a quantitative and qualitative better education and a higher level of soft skills (Osservatorio Competenze Digitali e Lavori Ibridi, 2019).

1.2.1 Digital workforce

The impact of digital transformation on the firms is very high. One of the most important consequences of the digitalization is the change in the workforce. The meaning of "digital workforce" has often been linked to software robots that work alongside human employees to undertake manual processes. However, this notion is incorrect, as it would seem to approach the definition of "augmented workforce" – a mixture of AI systems, robotics and cognitive tools – more so than the definition of "digital workforce." The digital workforce does not seem to have a clear definition which has been agreed upon by more than two significative parties. It is, however, considered to be a very important trend, especially when referring to Digital HR – a process optimization in which SMAC technologies are leveraged to make HR more efficient, effective and connected.

Figure 1   Digital HR: Percentage of responders rating this trend "important" or "very important"
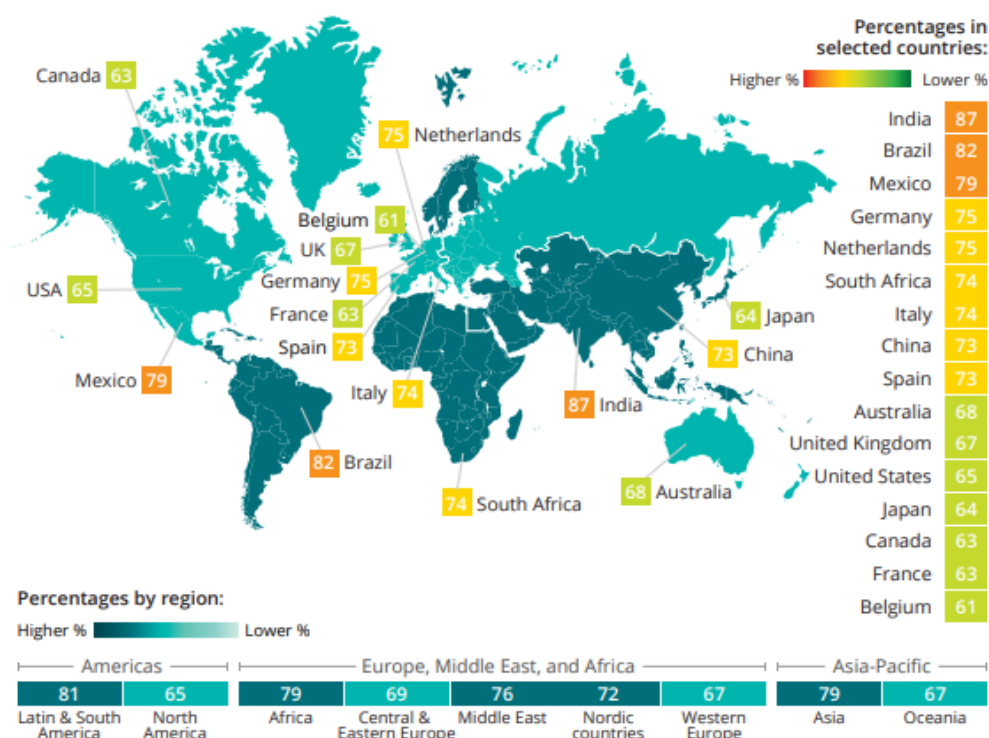
Source: Deloitte Global Human Capital Trend, 2017

The two concepts of "digital workforce" and "digital HR" are not the same, but they have two common denominators: technology and human capital. The digital workforce derives from the digital transformation that has been occurring in the past ten to fifteen years, throughout all fields of everyday life. Therefore, this workforce has developed many competencies that come from the continue usage of technology. Said competences can be leveraged at work: in fact, they represent one of the most important characteristics of the digital workforce.

1.2.2 Digital Fluency

Digital fluency can be defined as:

> «the maximum individual potential to achieve desired outcomes through the use of digital technology» (Briggs and Makice, 2012).

It is certainly one of the most important competences of the digital workforce, as being digitally fluent means using digital technologies strategically, with the ultimate purpose of easing the workload. Digital fluency is a broader concept than the simple "digital

literacy": while the latter refers to being able to understand which tools can properly execute a certain action, the former should be able to instinctually choose the correct and most apt program to work with, and explain why. It is an unconscious competence, representing the highest order of the "competence hierarchy," and can be characterized as a mixture of hard and soft skill.

Digital hard skills

Digital hard skills are the basic digital skills that can be acquired through studying – either at school, university, or via specific courses, but also as a self-taught discipline. These skills can be quantified and written down in the Curriculum Vitae of the employees. The principal competences are: knowledge and usage of IT packages, such as Microsoft Office package; knowledge and usage of softwares and/or hardwares, such as Salesforce; knowledge and usage of coding and programming languages, such as Java; technical competences which refer to social, mobile, analytics and cloud (SMAC) technologies, especially important due to the evolving way of communication and connection; technical competences which refer to IoT, highly liked to the servitization of processes which used to be manual and are now connected to the Internet in order to be monitored; technical competences which refer to the development and ideation of AI systems, suitable to facilitate hard or repetitive tasks; technical competences which refer to data analytics and Big Data, especially important in the analysis and management of aggregated data, which can be used with statistical purposes; technical competences which refer to cybersecurity, which is a branch of growing importance, and refers to competences that are both technical and strategic, in order to ensure digital security.

Digital soft skills

Digital soft skills are transversal skills which cannot be learned at a specific course. They cannot be easily quantified: they allow people to smoothly interact with digital instruments and to intuitively understand how they work and why they work the way they do. As reported by Andrea Magnani in a study on IlSole24Ore, digital soft skills can be divided into four main categories – which can result in a good career choice:

- Knowledge networking: it is the ability of recognising, extracting and organizing useful data from the web. Knowledge networking concerns the ability of filtering and

examining all kinds of data coming from the net and discerning between useful and unimportant. It also concerns the creation and elaboration of digital contents;

- Virtual communication: it refers to the ability to communicate efficiently, coordinate projects and manage one's digital identity in a digitalized workplace. This ability underlines the employee's ease to interact and collaborate with digital technologies, in order to have a fluid communication of projects, deadlines and teamwork;

- Digital awareness: it is the subtle ability to manage an equilibrium among all the digital devices and platforms. There actually is such a thing as "too much multitask," which can be detrimental to the attention each e-mail or phone call should deserve. The keys to have a good digital awareness are: to manage a good balance between real life and work life, to protect the privacy of personal data, and to safeguard health and the "Netiquette" – a code of good behaviour on the Internet.

- Self empowerment: it is the ability associated with problem solving and with the fluent usage of digital instruments with the aim to learn. High levels of self empowerment signify high attention span and work productivity, as well as a good level of problem solving, especially linked with digital technologies.

There is a fifth cathegory, which is the "digital creativity": it consists in the creative creation of digital content, and in the use of digital formats to answer to specific requests. This category is a mixture of hard and soft skill, as it requires a certain level of technical abilities, as well as an intuitive understanding of what content can evoke the desired feelings in the chosen target. Digital soft skills appear to be more important than digital hard skills (Osservatorio Competenze Digitali, 2019).

Digital fluency characterizes the digital workforce: it is one of the most important skill that companies seek in new employees, especially with the advent of smart working. It is not, however, the only ability of the digital workforce.

1.2.3 Other competences

The previous subparagraph related to the competences a worker should possess, in order to become competitive in the labour market. However, those are quantitative competences that could be measured, even if it is hard to do so. The one variable that is purely qualitative and cannot be measured is human reasoning. Critical thinking is one of the most important aspects of being a human. At the same time, it is the principal difference

between human and machine, one which will make it very hard, if not impossible, to completely replace every job with an automated one. Empathy is described as

«the feeling that you understand and share another person's experiences and emotions; and the ability to share someone else's feelings.» (Pomerenke, 2014)

Empathy should be embedded in the organization. It is the one variable that makes the cut between good and great, because it adds the flavors of critical thinking and instinct. Whereas it could be labelled as emotional bias, empathy is actually a very important skill that many entrepreneurs lack (Bonnstetter, Harvard Business Review, 2013). The ability to understand and experience what is around us is fundamental: the purpose of the business is to create and keep a customer, and firms can properly do that if they comprehend and meet the needs of their stakeholders and workers in the first place.

Another important competency of the digital workforce is the cross fertilization of skills: people who are prone to use digital technologies in their everyday lives can develop unrelated skills in other sectors of their behaviour. It is, for instance, the case of people who play massive multiplayer online role-playing games (MMORPGs), who develop logic and strategical skills in order to advance in the game (Yee, 2014), as well as leadership and management skills (Lisk, Kaplancali, & Riggio, 2012), learn from failure enhancement, trial and error and innovation processes (Brown & Martin, 2015).

Another important competency of the digital workforce is the cross fertilization of skills: people who are prone to use digital technologies in their everyday lives can develop unrelated skills in other sectors of their behaviour. It is, for instance, the case of people who play massive multiplayer online role-playing games (MMORPGs), who develop logic and strategical skills in order to advance in the game (Yee, 2014), as well as leadership and management skills (Lisk, Kaplancali, & Riggio, 2012), learn from failure enhancement, trial and error and innovation processes (Brown & Martin, 2015).

Another important topic is the identity of the digital workforce and their interpersonal relating. Technology plays a pervasive role in their everyday life, meaning that the digital workforce rarely have just one communication going on. If well-balanced, this allows them to have a deeper sense of self-awareness and of relation with their colleagues. They are able to multitask withouth overdoing it, facilitating the collaboration with colleagues who are not present in person and problem solving.

There are other digital skills that are connected to communication and sales.

Digital listening is the activity of listening to what a specific target is saying online. Workers with high digital listening ability can understand and measure when, how and how much the specific target is talking about a specific subject. It is an important skill that allows to gather market trends and to draw insights about one's professions.

Digital influence is linked with digital listening. If a company is aiming to influence the channel of their target, the logical step is to have a digital presence. The digital influence is the ability to control or direct the thinking or behaviour of the target, via the digital channels. The main reason could be to create a personal branding, or getting known.

Digital selling is the ability to properly exploit the digital channels as selling channels. This strategy is more frequent if the company is aiming to have a personal relationship with their client, hence the proprer channels for this strategy are social medias.

1.3 Drivers of change in the labour market

As the previous paragraph state, digitalization has been bringing numerous changes to the labour market. However, digital transformation alone is not quite as powerful of a force of change without the will to embrace change by companies. DT is bringing with it not only new technologies, but also new ways of performing activities, as well as important consequences for firms and for the labour market as a whole. All these variables influence the labour market by shaping the way the market itself is structured, but at the same time, the consequent shift in the labour market becomes part of the "new state" of the market, and inspire further changes and consequences, in a virtuous circle. The following subparagraph identify and describe the most important drivers which help technology to shape the labour market.

1.3.1 The role of AI and learning machines

Artificial intelligence (AI) is one of the most widely known and important technology digital transformation has brought. Artificial intelligence can be defined as:

> «the science and engineering of making intelligent machines, especially intelligent computer programs» (McCarthy, 2004).

It is the group of intelligent machines that can simulate human thinking capability and behaviour: it simulates human intelligence. Artificial intelligence is not limited to just one category of intelligent machines. It comprehends different branches, some of which are stated as follows.

The first branch is the logical artificial intelligence, which takes for granted the most general concepts and logical axioms and is based on a mathematical logical language. Another branch is the search branch: artificial intelligence programs examine a large number of possibilities before reaching a conclusion, which is next shaped as a question or inference – based on how they are expected to work. Inference is another branch of artificial intelligence, which refers to the non-monotonic reasoning: in a situation, a conclusion is to be inferred without default, but the conclusion can be withdrawn if there is evidence to the contrary (McCarthy, 2004). However, the non-monotonic reasoning has not yet reached common sense of the human brain. Pattern recognition is another branch of artificial intelligence. AI programs often manage to recognize all kinds of patterns, from simple, visible ones, to highly complex patterns. Their algorithms make artificial intelligence programs keen to recognize and memorize patterns of any form or type, so that the machine learns with each interaction. This leads to another branch of AI, that is learning from experience. AI programs based on connectionism and neural nets specialize in learning from experience: connectionism is an approach to modelling perception and cognition that explicitly employs some of the mechanisms and styles of the processing that is believed to occur in the brain. In particular, connectionist models usually take the form of neural networks (Barrow, 1996).

Artificial intelligence in firms has led the path to important technologies of machine learning: machines learn from past data without being explicitly programmed to learn. It is not a fully discovered technology, as in, not everything is known about this branch yet: since an artificial intelligent machine is not coded to learn, the mechanisms of how it decides to learn are not fully understood. Yet, AI and machine learning occupy a strong role in the firm, and it is only destined to grow. For example, AI can be part of the recruitment process of a firm: often, the initial interview of potential candidates is portrayed by an artificial intelligence, which, acting as a human, is programmed to understand and detect the signs that make a candidate fit for that job, both for his or her replies, and for his or her body language. AI in the recruitment process is just one of the examples of the use this technology can and is going to have in the future. Many jobs which are subjected to human biases, where there are supposed to be none, could be replaced by artificial intelligence and learning machines.

This technology is shaping the labour market, by making some old jobs obsolete – such as, in this case, the recruiter – and by creating new jobs – such as AI coders and engineers.

1.3.2 Sustainability and green works

Key theme of the Davos Agenda 2021, sustainability is certainly one of the main drivers of change in the labour market. Sustainability is a concept that emerged in the early 1980s from scientific perspectives on the relation between nature and society, where sustainable development was identified as meeting fundamental human needs while preserving the life-supporting systems of planet Earth (Kates, Clark et al, 2001). The concepts of sustainability and "green" have been part of our reality for years, and are only destined to grow in importance. Other than hearing about said topics in our everyday life, sustainability is of the fundamental topics in the labour market as well. Firms which are public interest entities and have more than 500 workers on a consolidated base are expected to redact the Sustainability report. The Sustainability report is a document addressed to all stakeholders of a company to check the progress made and identify opportunities for improvement on social and environmental levels. Companies are expected to reach certain quality standards, this is why certifications of quality – like the standard Social Accountability (SA) 8000, which relates to the health and safety of workers – play an important role in large companies. While in the past, Sustainability report has been a document that was expected only from large companies, in the recent years, small to medium firms are encouraged to redact the Sustainability report as well. Redacting this document signals potential investors and partners, as well as the public eye, that the company takes seriously the social and environmental issues the world is facing. Digital transformation can lead to the acquisition of more environmental-friendly machines at a reduced cost, especially in the logistic sector of the value chain. It is hard to balance the use of new, sophisticated technologies with the environmental impact those technologies have. Nonetheless, employers and firms all over the world are increasingly more concerned with the sustainability aspect of firms, making the labour market shift towards more social and environment-friendly companies.

1.3.3 Cost of learning

One of the challenges of the digital transformation is that the labour market demands both companies and workers to remain up to date as much as possible. Digital transformation

brings with it the challenge of changing old ways of doing tasks to new ways of carrying out activities. However, the cost of learning is often high, which brings some firms to being excluded from adopting the latest technologies or adopt new ways of redesigning the workplace. This is affecting the labour market: workers are more inclined to prefer companies which offer and incentivize opportunities to learn. According to a LinkedIn study by Bersin, 2018, one of the main reasons for people to leave the company they work with is the low opportunities to learn. Firms should consider devolving particular attention and a specific budget to learning opportunities, in order not to fall behind.

1.3.4 COVID effects: remote working

The year 2020 brought with it the global pandemic of COVID-19, a disease caused by the Coronavirus – part of a family of respiratory viruses. COVID-19 left some industries with the choice of stopping their production altogether or taking health risks in order to continue the production, whereas other industries had the third choice of making employees work from home (Bartik et al, 2020). Apart from the economic and social consequences, the pandemic made remote working the most common way of carrying out work activities. Undoubtedly, the success of remote working depends on the type of industry: industries that rely on manual work, like ceramics, or industries that produce food, like meatpacking, are less suited to embrace remote working. Bartik et al.'s study shows that industries that are better suited to remote work also seem to experience less productivity loss when switching to remote work. It also shows that industries which have workers with a higher level of instructions experience less productivity loss from remote working. This effect of the COVID-19 pandemic is not destined to disappear once the pandemic is over. In fact, Bartik et al.'s study also shows that about forty percent of the interviewed firms state that around forty percent of their workers will continue working remotely. Remote working is an important factor which has been shaping the labour market as well: workers would rather shift to companies which offer the possibility of smart working, instead of being obliged to go to the office. This signifies that the demand of labour for industries better suited for remote working will increase. It also means that companies need to invest more in digital solutions, especially if they are dealing with loss of employees, in order to attract more people.

1.3.5 Different opportunities for workers with disabilities

The COVID-19 crisis the world has been dealing with for the past year legitimized the use of computers to become much more widespread, to the point of almost becoming the standard way of performing certain activities in all sectors: firms, public entities and schools. Using computers instead of face-to-face meetings has been shifting the way people with physical disabilities are perceived. Labour market has becoming more inclusive towards people with motorial disabilities, since it is easier to attend a meeting even if physical unable to attend. On the contrary, though, it has become gradually more exclusive towards people with different types of disabilities, such as being hearing impaired or visually impaired. Assistive technologies to connect hearing and visually impaired workers with the main type of virtual meetings have not become very common yet, although they are one of the major research topics of the recent years. It is another important point of improving for companies: haptic aids – "touching, sensible" aids – and hearing aids are some of the technologies every company should guarantee, in order for these workers to easily remote working.

1.4 Fading Jobs

One of the most important effect of the digital transformation is the change in the labour market. Some of the traditional jobs, which have defined the labour market of the twentieth century, are fading; at the same time, new jobs – for which digital technology is the driving factor – are rising. With the advent of digital technologies, certain categories of jobs are going to become obsolete. With technology leading the path towards the digitalization of the most common tasks, the labour market is going to face a dramatic shift in some of the repetitive and substantially manual type of jobs. Telephone operators, postmasters, parking clerks and control personnel, typists and locomotive firers are examples of the type of activities that are going to be replaced by automated mechanisms or artificial robotics.

Telephone operators are going to be replaced by automated systems or artificial intelligent systems, like Siri for iPhones. The projected drop from 2019 to 2029 is 27.9% (US Bureau of Labor Statistics, BLS, 2019).

Another type of job that is going to fade away is postal office, postmasters and mail superintendents. The typical postal office is getting more and more automated: technologies are replacing the traditional face-to-face interaction at the office, digitalizing procedures

and streamlining a lot of processes that used to take time. Along said processes, all jobs of the postal office are going to fade. The disappearance of paper documents such as bills and letters is leading to the reduction of paper mail. This phenomenon will naturally evolve in the disappearing of post clerks. Important e-commerce businesses, like Amazon, are getting pick-up points where customers can go pick up their products when they want, without having to wait for a specific time for the courier to arrive. It is a trend that will be followed by standard postal offices, especially with the ever-more common digitalization of processes and documents. The projected drop from 2019 to 2029 is 21.9% (US Bureau of Labor Statistics, BLS, 2019).

Parking clerks, custom officers and quality control personnel are other types of jobs that are likely to disappear with time and the automation of processes. More sophisticated technologies give way to swift and automated processes in shops and parking lots, making the human presence obsolete, or even subject to biases. The projected drop from 2019 to 2029 is 36.2% (US Bureau of Labor Statistics, BLS, 2019).

Along the same path there are typists, who could easily be replaced by the implementation of software which can decode spoken words – much like the system used by Google Assistant or Alexa by Amazon. Typists, but also word processors, could also be integrated with other type of jobs, like assistants, especially if the tasks of said jobs are facilitated by the use of technology as well. The projected drop from 2019 to 2029 is 36.4% (US Bureau of Labor Statistics, BLS, 2019).

Locomotive firers are responsible for monitoring train signals and tracks to ensure that the train is traveling safely. For this kind of job, improved technology has reduced the need for a person to perform this duty: the projected drop from 2018 to 2028 is 68.3% (US Bureau of Labor Statistics, BLS, 2018).

1.5   Rising Jobs

The decline of some of the well-established jobs is not the only consequence of the digitalization we are undergoing. While digital transformation is hybridizing old jobs, it is also bringing forward new jobs, that did not exist at the beginning of the twenty-first century. Those jobs are getting exponentially more widespread as time passes. The vast majority of these jobs are related with technology, declined in almost every aspect: it is the case of digital architects and engineers, cybersecurity experts, but also E-commerce specialists and SEO specialists. A non-exhaustive list of said jobs is reported as follows.

Employees with the role of E-Commerce specialist manage and coordinate every activity that involve e-commerce. As this is a practice that is getting more and more common, firms need to have a specific business figure, to handle sales with the customers or negotiation with suppliers.

Search Engine Optimization (SEO) specialists, Search Engine Marketing (SEM) specialists and Social Media (SM) specialists, while they are not new roles, are becoming one of the most important position in the firm as well. They come from the widespread use of the Internet for market positioning and market research purposes. SEO specialist are marketing professionals who use research and analysis to improve a website's ranking on search engines, like Google. SEM specialists work alongside SEO specialists, to ensure that the overall strategy is coherent and optimal. A SM specialist is responsible for creating and administering content on all social media platforms, such as Facebook, Instagram, and Twitter, to build an audience and ensure customer engagement; they also monitor site metrics, respond to reader comments, and oversee creative design.

Chief Digital Officers (CDO) are responsible to drive growth and strategic renewal by transforming an organization's traditional business into digital ones. They put a special focus on creating new value through the smart use of digital tools, platforms, technologies, services, and processes.

Cybersecurity is a rapidly increasing issue, both in firms and in public sectors as well. As one of the consequences of digital transformation, it has become incredibly common to rely on technology in order to function. Cybersecurity experts are one of the new, most important professional roles that are going to exist in the future. Research by Burning Glass (2020) shows that the most requested skills in the next five years are going to be Application Development Security and Cloud security, with a projected 5-year growth of 164% and 115% respectively.

Data scientists and data engineers are two professional figures that are getting relevant thanks to the digital transformation. Data scientists collect, analyse and interpret extremely large amount of data, while data engineers are focused on building the infrastructure for data generation. As companies deal with large amount of data, derived from the most various sources – from servitization and IoT to market research –, these professional figures are going to be fundamental for the future of firms and labour market.
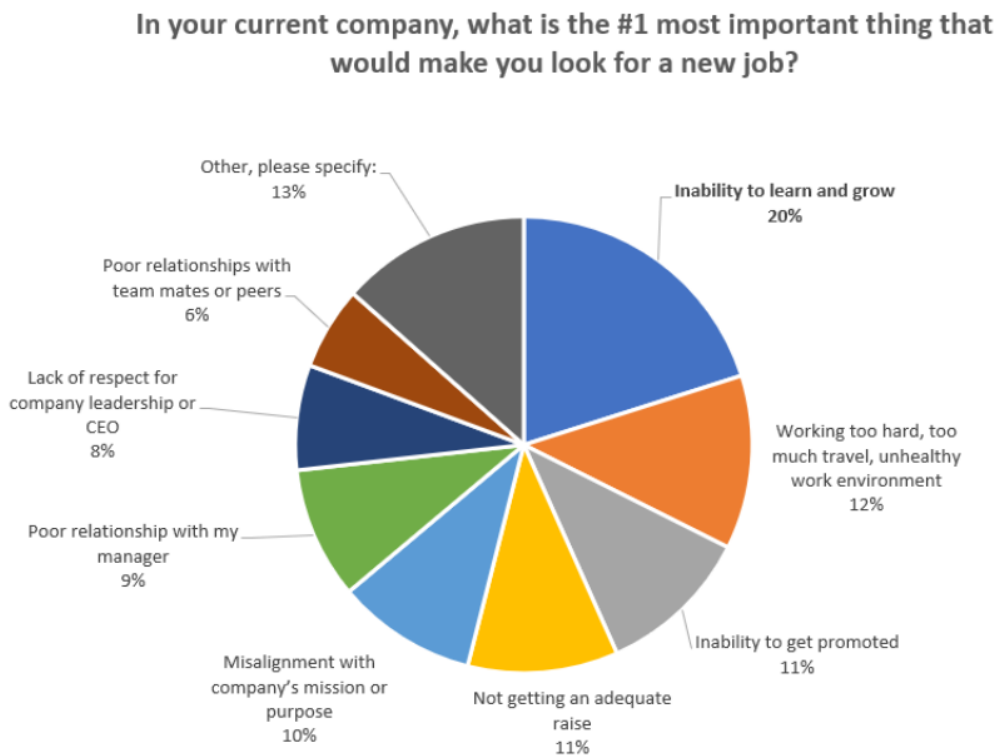
1.6 Hybrid Jobs

The principal consequence digital transformation and digitalization is having on firms is the birth and affirmation of hybrid jobs. Hybrid jobs is a big umbrella under which a lot of positions fall. More generally, if a category of job nowadays requires different competences from what it is used to require, in addition to the traditional ones for that category, then that type of job is likely to be a hybrid job. It is not easy to have a simple definition of hybrid jobs. The most concise way of describing hybrid jobs is to tell them apart from classic jobs: linked to the concept of traditional firms, traditional jobs imply that for the standard nine to six, forty hours a week job, the worker has to physically go to the company and work from there. "Where" the job is done is equally important as to "what" it consists of, and "how" it gets done. Hybrid jobs, instead, shift the attention on "what" a job requires to do, and not so much as to where it gets done, or how. In fact, a hybrid job requires many skills and roles: it combines and integrate technical, managerial, professional and relational competences with digital competences. It does not relate only to new positions in the firm, but it also relates to traditional positions, which are changing to adapt to the new value propositions (Gubitta, 2018).

Hybrid jobs work in a bidirectional way:

- Old jobs get facilitated, rethought or reorganized: they acquire new features of work, lose some other specifications, many tasks get easier to perform – like data science or archive roles –, their core activities get modified, or simply the performance and delivery mode change, integrating digital technologies in some or every part of the work tasks. Some examples of jobs that are undergoing a transformation are the Customer Relationship Management (CRM) – which goes from networking to digital CRM –, archiving jobs – which go from physical archives to digital clouds –, marketing specialists and Public Relations – which go from traditional marketing to Digital Marketing, from managing the identity of the brand in the mind of the target, to managing the identity of the digital persona, both to the target and to the general public who might hear about the brand;
- New jobs get established: entirely new digital jobs are created, for which digital technology plays a fundamental role, like E-Commerce specialists, Search Engine Optimization (SEO)/Search Engine Marketing (SEM) specialists, Social Media (SM) specialists, Chief Digital Officers (CDO).

With the emerging of the digital technologies, hybrid jobs are destined to replace the vast majority of traditional tasks. The job market is changing: research by Burning Glass Technology (2019) shows that jobs are becoming more hybrid and complex. At the same time, tasks are getting easier and more quick, due to the use of technology in each part of the job. One in eight job positions is being hybridized, for a total of 250 different occupations. The skills for hybrid jobs are not only digital "hard" skills: soft skills play an important role as well. Hybrid jobs tend to be more sophisticated and specialized: this is why only 16% of highly hybridized jobs are entry-level, compared to 58% of all jobs in 2018. The advent of digital transformation is setting the bar higher for firms and the learning opportunities offered to employees: "inability to learn and grow" is the main reason professionals would leave their job, as "the learning curve is the earning curve" (Bersin, 2018).

Figure 2   What is the most important thing that could make you look for a new job?

In your current company, what is the #1 most important thing that would make you look for a new job?

Source: Bersin, LinkedIn, 2018

Advantages

As jobs and firms are processing forwards and not backwards, hybrid jobs are a positive trend, not just a passive condition that is investing firms. There are proper advantages linked with them:

Hybrid jobs contrast automation: only 12% of hybrid jobs can get automated, whereas 42% of all jobs can become automated. They require a high level of human specialization and reasoning: as these jobs are more complex and advanced than the normal job, the human interaction is very hard to replace. It is a trade-off between accessibility and level of sophistication, one that cannot be easily solved by programming machines to learn how to do certain tasks. The hardest roles to replace are digital engineers and architects, in particular, big data architect, cloud architect, data engineer, business intelligence architect;

Hybrid jobs offer more guarantees of work: they increase the candidate's chance of being hired and contrast layoffs at the same time. Hybrid jobs condensate different competences into fewer ones: employees who perform hybrid jobs are more likely to be hired and less likely to be fired, because their role is broader than the normal single role they would play in the firm, were it not for the hybridization of their tasks. This results in a reduction of costs for the firm;

Hybrid jobs improve career growth. Hybrid roles often need the employees to interact with different departments and business functions, making it easier for them to absorb a great deal of knowledge from various points of view. This leads to having more tacit knowledge and becoming indispensable for the company, which welcomes career advancements, raises and rewards.

The hybrid jobs offer variety even to old-fashioned business. The growth of specific skills needed for these jobs is extremely high: according to Burning Glass Technology research (2019), in the years 2013-2018, the growth of machine learning skill and data science role was 809% and 663%, respectively.

New emerging digital technologies, such as Tableau, had a growth of 1103%, while the roles of DevOps Engineer – an IT professional who works with software developers, system operators and admins and IT operations staff to oversee and/or facilitate code releases or deployments on a CI/CD basis – and Hadoop Developer – a professional who takes care of the coding and programming of Hadoop applications, that allows for the distributed processing of huge data sets across clusters of computers using simple programming models, in the context of big data – grew by 785% and 424%, respectively.

Disadvantages

However positive the trend of hybrid jobs is, there are a few disadvantages for the firm and its employees.

As mentioned above, hybrid jobs offer a trade-off between accessibility and level of specialization. This means that there are few hybrid jobs that are available to everyone: only 16% of highly hybridized jobs can be taken at entry level. This leads to a higher entry barrier for younger workforce, who have less experience, and hinder the age diversity that could vastly benefit the firm;

The cost of hybrid jobs is not discardable. The company must learn, before it can offer its employees to learn. The first reason employees leave the firm is because there are few opportunities to learn and grow, as Bersin's study shows, but the employees cannot learn if the firm is stuck in its old ways and does not update its mechanisms. Workplace and business model changes are mostly driven by innovation, but innovation can only be reached with a dedicated effort, which is not cost free.

1.7 From *jobs* to *organizations*

We have seen that the digital transformation is bringing a lot of changes in the labour market, starting with the competences, both tacit and technical, that the workforce is expected to have. Hard skills are not enough: soft skills play an important role in the future of companies. Knowledge networking, virtual communication, digital awareness, self-empowerment and digital creativity are what separates a "technician" from an "entrepreneur". Human thinking and empathy are coming back *en auge*: critical reasoning is the tipping point of the scale, a resource that was almost becoming scarce, before digital transformation and the new way of perceiving the importance of human competitive advantage on machines. However, other than personal competences, the phenomenon of digital transformation is magnified by different factors, which have been shifting the labour market towards a more digital, social attentive scale. Artificial intelligence is pushing firms to new ways of dealing with jobs, as well as bringing forth new positions, while eliminating others. The attention of workers to social themes, such as sustainability and eco-friendly technologies, has been making firms more aware to the issues the Earth is facing in the twenty-first century. Digital technologies also require a considerable budget to understand how to properly use them: it follows that the cost of learning, for both firms

and employees, is high. The impact of the COVID-19 pandemic has brought remote working to its peak. It is a phenomenon which is going to last in the future, even after the pandemic is over, and it has been shaping the labour market in a permanent way. Digitalization is also bringing forth a new way of inclusivity and diversity: employees with physical disabilities are less ostracized by the new way of doing meetings, that is virtual meetings. We have analysed different trends for jobs: with the diffusion of new, digital ways of carrying out repetitive type of jobs, some are disappearing: among others, it is the case of telephone operators, postal office, postmasters and mail superintendents, parking clerks, custom officers and quality control personnel, typists, locomotive firers. On the other hand, digitalization and digital transformation has been highlighting new jobs, which have been beneficiating from the new trends of dealing with digital technology. Among others, is the case of e-commerce specialists, SEO specialists, SEM specialists, social media specialists, chief digital officers, cybersecurity experts, data scientists, data engineers. The most important trend of the labour market is, however, the hybrid job. Hybrid jobs are going to be what the future of the company looks like: there are not well-defined, simple roles anymore. The digital transformation has contaminated almost every branch of the classical roles, either by requiring further competences, such as statistical and data analysis competences, or by changing the way certain tasks are performed. One of the key elements of digital transformation is that workers need to have a vertical knowledge, but this vertical knowledge is not enough on its own. Employees need to have digital skills, soft and hard skills, which represent the starting point of soaring through new careers and new enterprise projects. Alongside this, the standard, hierarchical organization of the company does not match well the ever-changing market and needed skills anymore: this paves the way for new organizational structures. These changes mark a hard-to-reach point for employees who have been working in the same company for most of their life and who are close to retiring. New skills and new organizational structures are hard to learn and adapt to: this makes managing different cohorts of workers in the same firm one of the biggest challenge companies nowadays have to face.

SHAPING ORGANIZATIONS FOR HYBRID JOBS

2.1 Introduction

The transformation of the labour market and the digitalization of the workforce has an impact on the organizational structure of the firm. The traditional, hierarchical organization of the firm is not able to keep up with the changes in the market anymore. In addition to the different competences requested of the employees, which are permanently modifying the labour market, the firms are also facing the shift in technology: the advent of artificial intelligence requires investments both in the physical hardware, and in the investments for instructing the workers.

In this environment, traditional firms struggle to keep up with the time and need innovation, in order to be able to remain as competitive as ever. The need for innovating the organizational structure paths the way to new types of organizations, based not so much on hierarchy, but rather on agility and responsibility of each worker. In addition to this, companies need to be re-educated in order to properly embrace new organizations, which is not an easy task to implement. The culture of the entire organization needs to change, in order for the innovations to take place. This chapter is a literature review of how much the organization of work is changing. New organizational structures are the protagonist of this change, and it is a trend which is only solidifying with time. The second chapter is related to the traditional organizational of jobs and the hierarchical structure. The third chapter analyses the Agile organizational structure. The fourth chapter is related to Holacracy. The fourth paragraph highlights a business orientation called Ambidexterity.
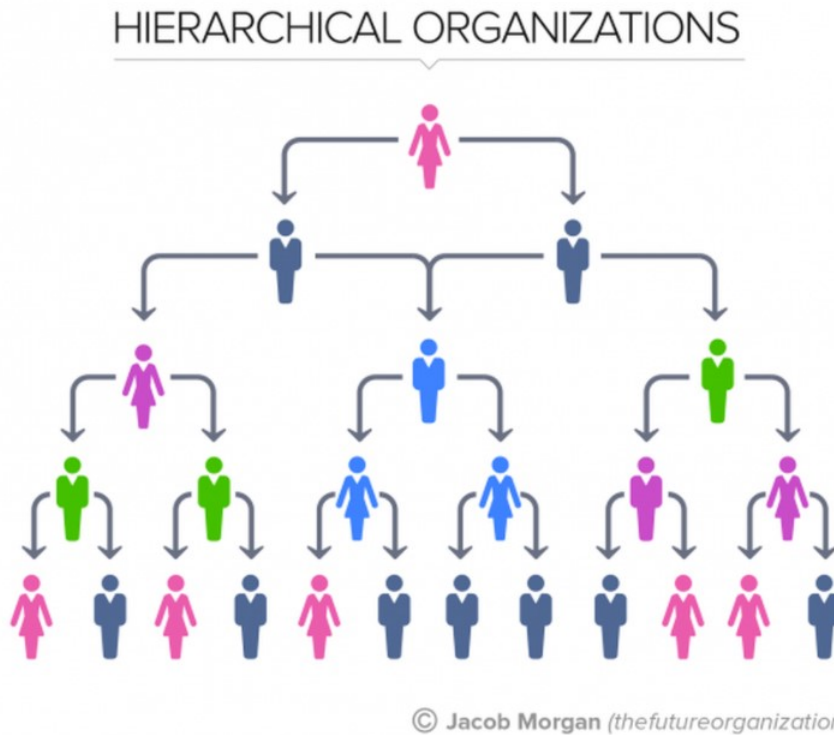
2.2 Traditional Organization of Jobs

Companies are one of the most important driving forces of the economy of our days. This legal entity represents a specific group of individuals who engage in and operate a business – commercial or industrial – enterprise.

For decades, working in a firm represented the classic job type: a suit, briefcase in hand and glasses represent the classical image of the conventional work in the company. The traditional office is a place where employees congregate Monday through Friday for forty hours per week or more, in order to produce work for a company. In traditional companies:

- The structure of the firm is hierarchical and well defined, meaning that the power flows upward and vertically.

  Each department has a head, who reports to the manager of that department. The group of managers may refer to an upper management, who is in direct contact with the CEO, or directly with the CEO. Usually, the CEO and upper management are people with a high level of seniority, and who are deemed as experienced enough to fit their job: this means that usually, the higher you go in the hierarchical organization of a traditional firm, the older employees are;

- There are strict guidelines for most departments and roles. This type of firms often implement "One-size-fits-all" policies, an idiom which comes from the garment industry, where items were designed to fit a range of sizes. In terms of corporate governance, this expression means that standard rights and rules are applied to each person inside the company or department, without taking into consideration different contexts, ethical nuances or exceptions;

- Employees are departmentalized: the interactions between people of different departments are scarce and limited, because employees must follow their own business to achieve pre-set goals. Results and achievements are fixed and difficult to change, as the organization is fixed and rigid.

Figure 3   Hierarchical organizations

Source: https://www.forbes.com/sites/jacobmorgan/2015/07/06/the-5-types-of-organizational-structures-part-1-the-hierarchy/?sh=733f961b5252

The classic nine to six work hours, usually spent in a cubicle or personal office, characterize this kind of work. Typically, big companies founded in the last century, which had huge success and never had to change their business model in order to prosper, are the ones still considering the traditional approach to work as the most efficient.

However, with the commoditization of the Internet, the classic office work has been gradually shifting toward a more hybrid type of job. The digitalization of our life has been contaminating every aspect of our life: it is not easy to find activities that can only be done in the classic way, without the help of digital technologies. It is to keep in mind that technologies have always been used in our life, and that we refer to digital technologies as in to mean the products of:

- The digital revolution: computers, smartphones, tablets, Internet of Things (IoT), Artificial Intelligence and high-technology systems;
- The wave of digitalization caused by the emerging SMAC technologies: social, mobile, analytics and cloud computing.

2.3   What is DT bringing: challenges and changes

One of the main changes digital transformation brought in the labour market is the advent of another type of workforce, the digital workforce. This category is different from the old, traditional workforce, who is more set in traditional ways of doing work, instead of trying to branch out. The principal difference between the traditional workforce and the digital workforce is their diversity of skills and competences. Digital workforce is supposed to be able to interact and utilize digital technology in a swift, instinctual way. The "digital fluency" of this type of workers includes soft skills and hard skills, both needed to understand and make technologies their own. However, digital transformation is also bringing forward new challenges that the traditional workforce did not have to deal with. The most important challenge is the balance between personal life and work life of workers. E-mails and information and communication technologies have become invasive in the life of employees: e-mail backlogs are not only common, but also increasingly more frequent. According to a study by Barley et al., 2011, employees who spend more time processing email perceive higher levels of overload at work. Employees feel the pressure of not appearing unreliable or unresponsive, hence they never fully take a break from work, not even at home. With the COVID-19 pandemic and the diffusion of remote working, the balance between work life and personal life seems to be an even bigger issue. The average length of workday has increased by 8.2%, that is 48.5 minutes, and e-mail activity has increased as well (DeFilippis et al., 2020). This blurring the line between work and personal life has firms struggling to come up with organizational solutions that can help the division of the two spheres of the workers. Traditional organizations have always been problematic, with workers having to stay overtime to finish their work for the day. In fact, the tacit culture of some of the big companies does not look kindly upon leaving on time of workers: they are seen as not committed enough if workers do not do the amount of overtime others are doing, or if they leave before the CEO does. COVID-19 heightened this issue and transferred it at home: albeit the working hours remain the same, workers feel obliged to answer the last phone call, the last e-mail or just to finish the last worksheet.

Another important challenge firms are undergoing is the ever-changing market, which in the latest months has been moving quicker than ever. Businesses needs to react quickly not only as the market changes, but also as the current COVID-19 pandemic parameters

and indications shape the direction businesses have to follow. Traditional, hierarchical organizations are simply not well-equipped enough to deal with this sort of fluidity. Standards and procedures which have been set in place for decades cannot be easily changed to adapt to the uncertainty of this period. It follows that the need of different types of organizational structures is stronger than ever. While the traditional structure has worked thus far and does have its merits, multiple research show that it is time to change (Accenture, May 2020). COVID-19 has only quickened a process that started in the past and was only destined to grow of importance, up to the point to overtaking the traditional ways of perceiving organizations.

The following paragraphs describe two types of organizational structures which are becoming more and more established, Agile and Holacracy, along with the best way of managing exploration of new opportunities and exploitation of existing activities, which is Ambidexterity.

2.4 Agile organization

The advent of digitalization, the fluidity of the labour market and the challenges dictated by the most recent pandemic brought the business, along with public organizations and schools, to the point that the pause and resuming of the activities has become the norm. Organizations and public entities have to react in time with this fluctuating seesaw.

Stop-and-go of work: in between hybridization and classical organization of jobs: serve un altro tipo di struttura. Ci serve per il 4 capitolo in cui il mentoring e r.m. sia messo lì affinchè il lavoro ibrido sappia inglobale l'organizzazione, e non venga visto come una roba da cui non si può tornare indietro né si può tornare avanti qualora volesse.

2.4.1 From machine-based to organism-based organizations

The classical, traditional organization of company is not *en auge* anymore: the speed at which firms are changing is higher than the speed of adaptivity of the classical organizational structures. Up until the early 2000s, the vast majority of firms heavily relied on hierarchical structures, seeing the company as a "machine" to keep well-oiled and running as clockwork. Fordism and Taylorism were two intrinsic backbones of the work in the firm: discipline, standard processes, tailored tasks with practical objectives and "no place to run" organizations were the spine on which traditional firms are based on. This type of companies can work well, but it is very hard to achieve it: all processes should be designed

in a very precise and deliberate way to ensure that everything goes on smoothly, and that workers can rely on rules and priorities coming from the hierarchy.

However, disruptive changes are happening throughout all markets, due to the digitalization of the most recent years. The way of seeing organizations is changing, from a machine-based organization, to organism-based organizations. They challenge the old paradigm of the company as changing trends get more and more affirmed. Quickly evolving environment and the needs of increasingly important stakeholders meet with the constant introduction of disruptive technologies in the firm's way of managing tasks. This accelerating digitalization paths the way to the democratization of information and new war for talent: information is more accessible to everyone, given how easy it is to finding every piece of news at the tip of our fingers; at the same time, firms are leading towards hiring talents, since the tasks are becoming more and more learning-centred. Machine organisms are not the principal response of dealing with this changing environment: their hard-set routines and beliefs are not ones to quickly adapt to the change the market is undergoing, especially when they have operated in the same way for decades. In order to deal with the change in the environment, organizations are leaning towards more flexible structures, which considers the firm as an "organism" rather than a "machine": this type of organization is the Agile organization.

> «An agile organization is a network of teams within a people-centered culture that operates in rapid learning and fast decision cycles which are enabled by technology, and that is guided by a powerful common purpose to co-create value for all stakeholders.» (Aghina et al., 2017)

This is the definition of agile organization, by the McKinsey Agile Tribe. Agile organizations are defined by their ability to react quicker and quickly adapt to changing circumstances. One of the most important paradigms of Agile is that its goal is to balance stability and dynamism: it makes the organizations both stable and dynamic at the same time (Aghina, De Smet, Weerda, 2015).

2.4.2 The five trademarks of Agile organizations

Agile is a type of organizational structure which can be implemented by every company. It is not just for small or medium firms; everyone could set up this type of organizational structure and reap its benefits. Organizations that want to implement Agile can begin by setting up five trademarks of Agile as markers to reach their goals. These five trademarks

of Agile can be implemented so that they make the organization more agile and less hierarchically structured. The five trademarks work better if all of them are properly implemented, as they describe the organic system that enables organizational agility (Aghina et al., 2017). The five trademarks of Agile organizations are: structure, process, people, technology, strategy.

Structure

The main goal of an Agile organization is to shift from the need to workers in everything they do, lest they act for their own personal profit, to give employees clear responsibility and authority, in order for them to become more engaged and figure out brilliant solutions on their own. The agile structure is founded on solid basis: a primary home, representing the core of the business and where the majority of coaching and training happens, transparent governance, with defined "whos" and "hows" in terms of decision making and resource allocation, and a solid process of shared performance metrics and standard language. This primary home is the base for a network of empowered teams and dynamic capabilities. As new opportunities arise or unexpected challenges threaten to destabilize the company, dynamic capabilities can adapt quickly to the change, and enter into play in order to restore stabilities. Those dynamic capabilities are:

- changing the teams, with setting up and dissolving teams depending on what the change requires;
- peer review, which means feedbacks to colleagues;
- team targets, which are set at regular intervals in order to deal with the dynamic change the team is supposed to face;
- resource allocating, which assigns people and money to specific teams;
- process building, which stacks tasks in a modular way in order to obtain achievements for every step of the way;
- decision convening, which brings cross-functional leaders to debate decisions;
- decision delegating, which happens in real time, to the workers close to the day-to-day actions.

Thanks to those dynamic capabilities, the company is able to move quicker and without major disruptions to the changes determined by the market. "Machine" structures could run smoothly if they updated their every process as the change in the market requires.

However, those mechanisms are hard to change, and harder to adapt to. Agile organizations, on the other hand, are designed in order to keep the dynamic capabilities running on a solid, fixed primary base. The correct management of resource allocation is one of the principal keys of keeping the dynamism running, and it requires proper management. Agile structure implements clear structures that reflect and support the way the organization creates value. Like Holacracy, Agile ensures clear, accountable roles so that people can focus on their tasks and results, instead of worrying about responsibilities and bureaucracy. Governance is shifted as much towards the people as possible, and the functions become communities of knowledge and practices that serve as "homes" for workers. The workplace is very important for Agile: the creation of an open and virtual environment is one of the focus points of this type of organizational structure. This type of workplace empowers employees to do their job in the most effective way. On the same note, the creation of active partnerships, networks and ecosystem is very important as well, as it builds up relationships between workers and affiliates.

Processes

The main goal for Agile processes is to achieve rapid decision and learning cycles. The shift in mindset has the firm moving on from the hierarchical point of view, where in order to deliver the right outcome, senior workers would define the way the process was going to be outlined, down to a detailed plan to get there and minimize the risk. Agile organizations are characterized by reacting quickly to the changing environment: therefore, the best way to reduce risks is to embrace uncertainty and try quick solutions to impending problems.

Agile organizations act in rapid cycles of thinking that aligns well to the way Agile thinks of projects and accomplishment. Thinking, doing and learning are quickly enacted: Agile organizations focus on rapid iteration and experimentation. This means that they produce a "primary deliverable" very quickly, after bursts of activities called sprints. In these sprints, people check in with each other and have meetings to check the processes and remain up to date. After the primary deliver, the team or teams work on the second deliverable, and so on and so forth, until the final deliverable is reached. This process is called *scrum*. Scrum is a framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value (Stormi et al., 2019). They prefer quick, efficient and continuous decision-making to the

prospect of delaying results, no matter how perfect they might come out. Agile organizations leverage standardized ways of working to facilitate interaction and communication between teams. Working in rapid cycles requires that Agile organizations enact transparent information circulation, so that everyone can be up to date to the others' work and are not hindered by bureaucracy when trying to find specific information. Continuous learning is a fundamental part of Agile: if everyone can learn from each other and their successes and failures, the workers are better off as well as the organization.

People

Agile aims to have dynamic people that ignites passion. It focuses on every single person instead of focusing on the leaders and management only. The mindset shift goes from the leaders' need to control every single step of the processes and set specific tasks to reach, to the leaders' ability to empower employees to take full ownership and drive them towards fulfilling their role. Agile puts people at the centre of their focus: leaderships serves to incite workers to reach their full potential, instead of limiting them by adding rules and specific boundaries to follow. This is called shared and servant leadership. Employees feel the cohesive community in support of their choices, and this also helps to develop employees' own entrepreneurial drive, by taking decisions into their hands and acting upon them. Role mobility is another important trait of Agile organizations, which also fosters the entrepreneurial drive of workers: employees move regularly between roles and teams. They do not remain fixed into specific roles, and this also helps their learning.

Technology

Technology is one of the main drivers of the future. With Agile, the mindset shifts from technology to support other activities, to technology seamlessly integrated with every aspect of the organization. Just like every other characteristic of Agile, technology is never static but evolving alongside everything else. Customed products can be achieved via digital technology, but also management of people will shift towards a real-time communication. At the same time, technology should incorporate technical innovation, whenever needed: therefore, Agile organizations need digital technologies to continuously be up to date.

Strategy

Instead of looking at the market with the desire to take from a scarce pool of resources, Agile organizations prefer to look at if the market overflows with possibilities and opportunities, which the organization takes in order to create value for the shareholders. Agile organizations believe that a shared purpose and vision is what they can offer to the market: being customer focused, they seek to meet their needs by being as non-intrusive as possible. Seizing opportunities for them does not mean to take from others, but to draw from the same source of opportunities, which can be used by potentially every firm. The allocation of resources is flexible inside of the firm, which causes the agile creation and dissolving of teams when their purpose is complete.
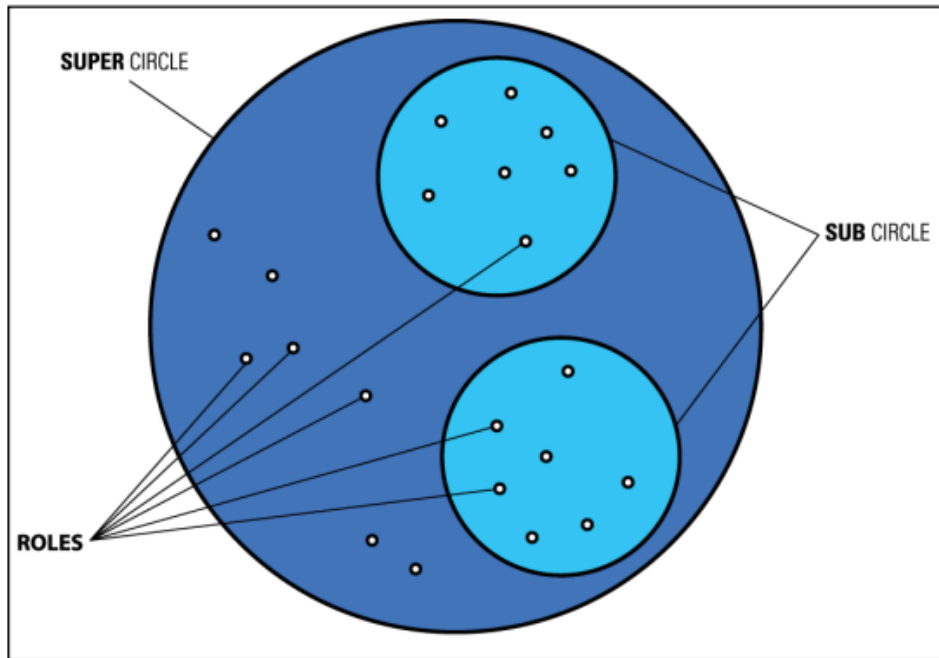
2.5 Holacracy

Holacracy is a method of decentralized management and organizational governance. It is a new way of structuring and running your organization that replaces the conventional management hierarchy (Holacracy website, February 2021). Instead of operating top-down, in a hierarchical structure, Holacracy is based on a Holarchy, a term used for the first time by Arthur Koestler in 1967, in his book *The Ghost in the Machine*. A Holarchy is composed by *holons*, which are "part of a larger whole", and the connection between these holons is what is called "holarchy". Holacracy is then a connection of smaller holons, or roles, that working together form teams. These teams are organized into departments, which are part of the entire organization. The principal goal of Holacracy is organizing the work, not the people, which leaves quite a bit of freedom to workers (Robertson, 2015).

The fundamental elements of Holacracy are the constitution, which is a general document that is applicable to any organization and case. It defines the rules and redistribute authority, meaning that the power does not flows top to bottom anymore, but it is spread across the organization. A new way of structure is another key element. It defines roles and authority within the organization: traditional hierarchies leave the way to units and teams organized in circles. A unique decision-making process is another important element of Holacracy: it is what upgrades the roles and authority based on actual tensions, rather than theoretical predictions. The last fundamental element is a meeting process, which keeps the teams' members in synchrony and ensure efficiency in the development of the ongoing activities.

2.5.1 Structure

Holacracy does not have a fixed structure. It is driven by tensions that could arise in the workplace at any moment: the duality of being *what is* and *what it could be* is the key element that characterizes this innovative organizational structure (Robertson, 2015). The basic structure of Holacracy is composed by roles, sub circles, and super circles.

Figure 4   Basic Circle Structure of Holacracy

Source: Robertson, B. J. (2015). Holacracy: The new management system for a rapidly changing world. Henry Holt and Company.

The principal element of Holacracy is the *holon*, or the role. It represents the task that has to be performed by an individual. It is not, however, one individual, as one worker may have different roles. Each worker does not respond to the question "what is your role", but instead, to the question "what are the other co-workers counting on you *for*". Each person has different roles to perform, and each role comes with a specific responsibility. Accountability is the most important factor of Holacracy: each role is well defined and has something specific to be accountable for. In this way, the firm manages to align the expectations of roles to the actual roles: every single one has explicit accountability, authority, and management practices.

Roles are grouped into sub-circles, which are groups of roles – still not individuals – that are self-organized and autonomous, in order to achieve their specific purpose. A sub-circle can be a project team, or a really big role in itself. Each circle has a breakdown of

what is needed, and handles its responsibility. They can be of various dimensions and can be related to anything, from specific projects, to entire business lines.

Super-circles are groupings of multiple sub-circles. Those are usually entire departments, such as Marketing, or Logistics.

The sub-circles are linked with the super-circles via two specific roles, which toe the line between the two types of circles. Those roles are the lead links and the representative links. The lead link is appointed by the super-circle in order for it to be represented inside the sub-circle. Vice versa, the representative link represent the sub-circle in the super-circle, and is usually elected from the people inside the sub-circle.

Figure 5   Linking Circles in Holacracy
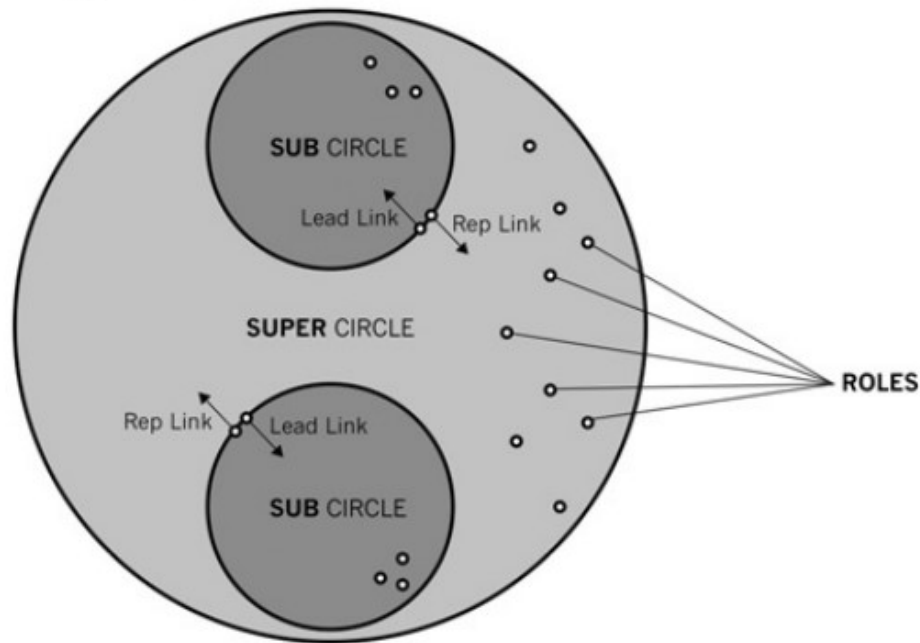
Source: Robertson, B. J. (2015). Holacracy: The new management system for a rapidly changing world. Henry Holt and Company.

2.5.2 Reasons to adopt Holacracy

Holacracy is a relatively new type of organizational structure. It has benefits that the traditional hierarchical organization of firms does not have.

One of the most important benefits is surely its responsiveness to the market. Small decisions replace large scale ones, which leads the organization to respond quickly to a shifting environment and maintain agility.

Another perk is that the fundamental concept of each team and department is purpose, which adds up to giving the entire organization a purpose.

Holacracy also removes obstacles in the decision-making process. Less bureaucracy means that the work gets done faster and there are fewer complications and delays between the transmission of information. The agility of this structure is also based on frequent, scheduled meetings that lead the company towards improvement in performance. Leadership is distributed throughout the organization: every individual has resources and responsibilities to perform their tasks, and each individual is held accountable for them. Each individual is not a role, but has roles: the distinction between individuals and roles avoids mismatching regarding roles and identity. This distinction also brings individuals to a higher level of acceptance of age-inverse work relationships. Circles are not fixed and are not based on age or seniority. This means that people of different age and "rank" work together and are more likely to get along and not to hinder the circle's performance by frivolous conflicts between generations. Each circle, as well as each role, has its own authority and autonomy, and this is a cognitively positive factor for senior generations, who could be put off by having to work with younger employees, or by having them as their bosses.

2.6 Ambidexterity

«Organizational ambidexterity refers to the ability of an organization to both explore and exploit—to compete in mature technologies and markets where efficiency, control, and incremental improvement are prized and to also compete in new technologies and markets where flexibility, autonomy, and experimentation are needed.» (O'Reilly III et al, 2013).

The definition of O'Reilly III about ambidexterity makes it clear that the concept of ambidexterity is a business orientation rather than a proper organization structure. Ambidexterity is aimed to balance and figure out the best way of managing the exploration of new opportunities and the exploitation of existing activities and markets. To guarantee a long-term success in a context of technological revolution and uncertainty, the company should be proactive and able to exploit the value of their well-established assets. The firm needs adaptability in order to explore new opportunities, but it also needs alignment in order to exploit existing opportunities: this dualistic concept is important to grasp and manage properly. It is not an easy task to manage. Firms that favor exploration without properly paying attention to exploitation often suffer the cost of experimentation without gaining

much of the benefits: these companies present too many underdeveloped ideas, since they do not focus much on pursuing the ones they find to have the highest potential turnout. Organizations that engage in too much exploitation without properly exploring new ideas are bound to find themselves trapped into a stable equilibrium. This is not a bad situation to be part of: in the immediate future, the company would prosper, but this way of acting does not bode well with the changes the market is undergoing, and with the challenges it is bringing forward. Changes in the environment of the firm are likely to blindside the company and leave it lagging behind. Becoming ambidextrous means that the firm is able to effectively manage the exploration of new ideas, as well as reaching a compromise between new research and development, and focusing on the ideas that look most promising and might yield the best result for the company. Maintaining an appropriate balance between exploration and exploitation is one of the most important factors in the prosperity of a corporate system.

Ambidexterity can be achieved through four different alternatives. The first one is *separation*: it consists in the creation of separate business units for different types of activities. It is the simplest and most common approach to ambidexterity (Reeves et al., 2013). This means that the firm is divided into separate units which deal with exploration and exploitation on their own, while the decisions are taken at the top of the organization. The role of the top management is to define the structures and to made trade-offs between the two units. Roles are established and clearly defined, and the probability of having specialized employees is high (Birkinshaw, Gibson, 2004). However, structural ambidexterity can sometimes lead to isolation and lack of linkages to the core business. Information silos are likely to happen, as the two separate units do not need to communicate between each other, and this may lead to problems regarding the flow of information. Additionally, it may not react as well to the changes of the environment. In order to properly implement this type of ambidexterity, the company should identify scale-driven and innovation-driven business units and set boundaries between them.

The second way to achieve ambidexterity is *switching* approach. Here, a company changes its style over time, in order to follow the changes in the environment. The company needs to first put itself in the mindset of exploration: it has to be open to new ideas, as if it is looking for a breakout in the immediate future. However, with time, the company needs to shift towards a more exploitative type of mindset (Reeves et al., 2013). Switching

requires information to flow across boundaries as freely as possible, but problems arise when a business unit reacts slowly to change. When this type of ambidexterity is the best solution for the firm, the management needs to break down silos and create an environment which encourage collaboration and flexibility.

The third way to achieve ambidexterity is *self-organizing*. It calls for individual employees to make choices between alignment-oriented and adoption-oriented activities in their day-to-day work. This approach is the preferred one when the firm needs to deploy multiple systems simultaneously (Reeves et al., 2013). This type of ambidexterity gives importance to the human part of the organization. Employees have the liberty to focus on either type of activities based on their judgment: the choices are not made at the top of the organization anymore, but on the frontline: by salespeople, office workers and so on. However, the role of the management does not disappear: top management has to develop the organizational context in which individuals act. It follows that roles are not well defined, but relatively flexible, and at the same time, it is easier to find more generalist workers, who can work on either one of the activities needed by the firm in a specific moment, rather than specialized people (Birkinshaw, Gibson, 2004). Companies achieve self-organizational capabilities by breaking the organization into small units and creating individualized performance contracts. These units negotiate by themselves with other units. Local rules are important to implement and follow. However, the most common drawbacks are the increasing cost from duplication, the lack of scale because of the small size of the units, and the additional cost of enforcing specific rules for each unit.

The fourth way of achieving ambidexterity is through an *external ecosystem*. With this approach, companies need to set up a diverse ecosystem of external parties in order to source the strategy they require (Reeves et al., 2013). This type of approach works when the industry and the market is highly dynamic and requires rapid adaptation, which the firm in itself is not able to achieve. The cost of this approach is high, as it is the risk of cooperation. When properly implemented, the firm is able to access to different platforms thanks to its partnership.

It is to be noted that the firm which employs a good number of younger workers is facilitated to reach ambidexterity. Millennials and the youngest Gen X are more likely to have the right mindset to achieve ambidexterity, because of their flexibility and transversal competences.

It is important to state that each type of ambidexterity is not mutually exclusive, and it does not mean that the firm cannot shift from one to another, especially if the market requests certain changes that are better reached from another type of ambidexterity. Although ambidexterity is hard to master, it is an increasingly critical capability for the company, and especially for those which are struggling to find the right balance between exploration and exploitation.

2.7 New organizations in action

The new organizational structures the firms are experiencing bring forward a new insight on the organization of workplaces and the managing of workers. Innovative workplace seems to work better if along with innovation, a good management of people based on responsibility is implemented. The most important need for the company is to keep up with the changes in the market and with the surrounding environment. This can be achieved through other organizational practices that are not based on hierarchy. Agile is the organizational structure which works better in reacting to these changes: it allows to obtain deliveries from the first spurs of effort, which get only improved as more time and effort is put into them. Team working is very important, as well as a defined responsibility for each worker. Holacracy is similar to Agile from this point of view. Roles as *holons* are defined with authority and accountability. The organization of work is based on team works as well, with a very flexible organization which allows the firm to react quicker and in a more precise way to the changes requested to the firm. Ambidextrous organizations are able not to focus too much on specific parts of their strategy, but rather they manage to have a good balance between alignment and adaptability.

These new organizational structures highlight new issues. Hybrid works thrive on these types of organizations, but on the other hand, traditional jobs seem to have a harder time to adjust to them. At the same time, the issue of the co-existence in the firm of different types of generations is more and more present. Those different cohorts of workers have all different characteristics and necessities. It can become an issue in firms which do not to try to manage that: the culture of certain types of workers is not going to react in the proper way, if put in front of changes without a proper training beforehand, or without being explained why. The generational change is an issue that we will address in the following chapters.

WHY GENERATIONS MATTER

3.1 Introduction

Organizations are changing, and different factors are what play an important role in the new definition and shaping of companies. The ever-present digitalization reshapes the culture of the firm: whether wanted or not, this type of change is most definitely one of the major factors that come into play when talking about the change organizations are undergoing.

The labour market is shaped by a new type of workforce: digital competences are nowadays one of the most important aspects of the workers of the firm, to the point that good digital skills are not only requested, but also expected.

The change of the organizations' ways of performing activities is also strongly influenced by the type of organizational structure the company decides to implement. Traditional, hierarchical organizations are not the norm anymore: they do not react as quick to market fluctuations and to its requests. Companies needs to adapt to the rapid changes that the environment is experiencing.

At this point, another important factor comes into play, when determining the ability of companies to keep up with times, and that is the generational diversity of the workforce.

This chapter will analyse *if and how* generational diversity matters in the workplaces. The second paragraph gives some reasons of why the topic is important, while the following paragraphs analyse each generation in their most common trends, from an organizational point of view. The third paragraph is related to Baby Boomers. The fourth paragraph is about Generation X. The fifth paragraph is dedicated to Generation Y, or Millennials. The sixth paragraph describes Generation Z. The last paragraph highlights differences and similarities among these generations.

3.2 Do generations really matter?

We are able to group four different generations of workers who currently work in the same company: Baby Boomers, Generation X, Generation Y (or Millennials), and Generation Z:

- the Baby Boomers generation refers to workers born from 1945 to 1964;

- Generation X refers to the group of workers born between 1965 and 1980;

- Millennials cohort refers to workers born from 1981 to 1996;

- Generation Z is the latest group of workers entering the market: born from 1997 to 2010, only the older Gen Z-ers are currently coming into the companies.

These four generations can be grouped together because they exhibit similar behaviours and characteristics as workers. Companies shifted from having two generations working together, who mostly showed the same, or very similar, types of behaviours, to having half a century worth of generations trying to coexist.

The traditional organizational structure is suffering the blow of diversity, while at the same time, new types of organizations are not properly accepted by older generations of workers. The digital transformation is permeating almost every part of the company: Millennials and Gen Z are the generations who better adapt and react to digital technologies. Millennials experienced the change towards the digital transformation on their own skin; Gen Z-ers were actually born already surrounded by digital technologies. Companies are struggling to adapt to change: it follows that the best way to start is to employ younger workers, who are not afraid of change, but are able to bring it themselves in the company. Yet, the majority of workers is still characterized by Baby Boomers and Gen X-ers. These generations have always been told to behave in specific ways, they have standard routines and practices that have worked out for mostly of their working life. They are not excited for change. Instead, most of them resist the implementation of new ways of performing activities, or new types of leaner, faster organizational structures. The problem firms currently have to face is that these four generations have to coexist, at least for a few years. The younger cohorts of workers, such as Millennials and some Gen Z-ers, are more likely to embrace and propone change. They are ready to put their digital expertise to use and to work in innovative workplaces. Baby Boomers and Gen X-ers are more tied to the traditional ways of performing activities.

These trends become visible when analysing the labour market. People who are more than 40 years old are more likely to be hired when the requested tasks do not involve much digital competences. On the contrary, people who are under 40 years old are more likely to be employed in high digital roles.

Gen X-ers are more likely to be employed in low digitalization activities. This may lead to a progressive marginalization of said workers in the firm. We are close to a polarization of the labour market, where age becomes one of the most important factors when hiring people.

Figure 6   People on Work: X-Generation vs *Millennials*
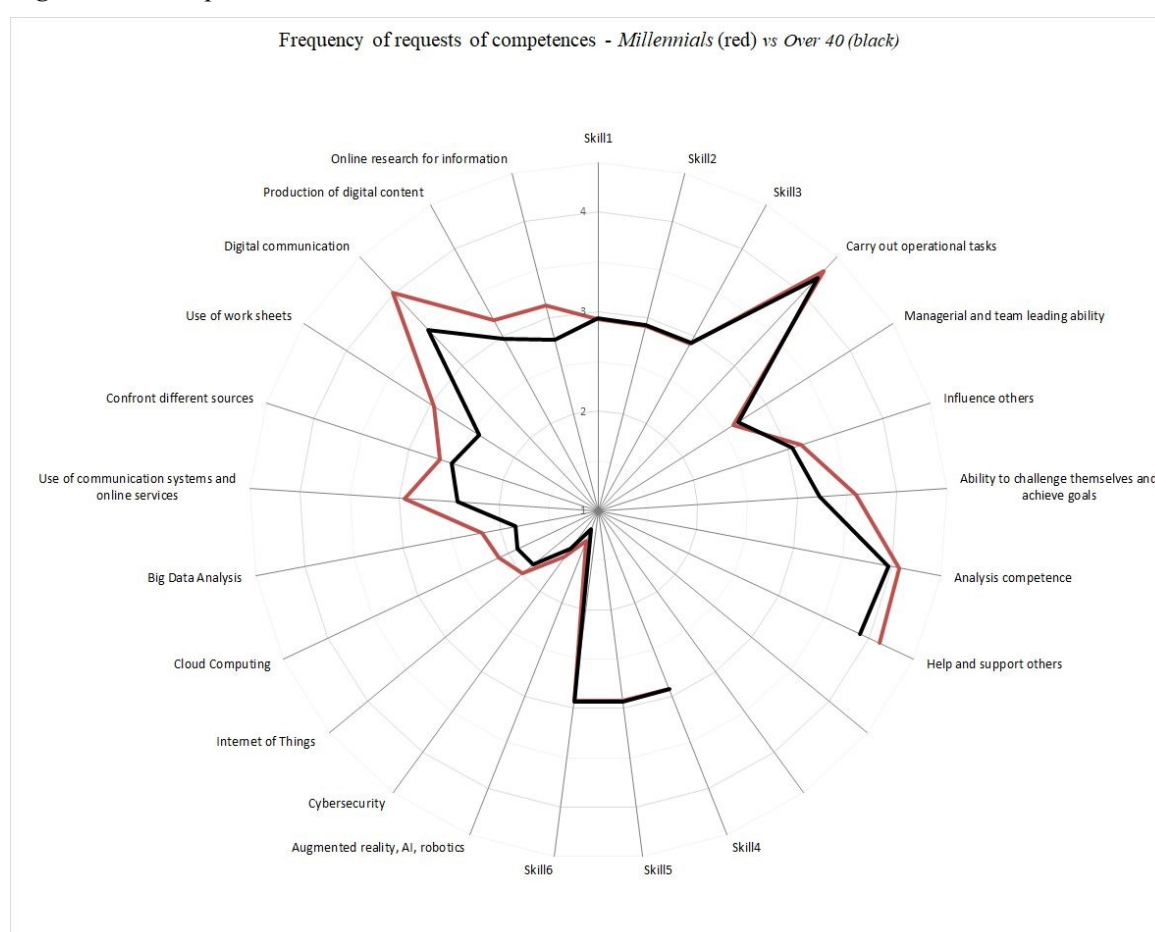
Source: Osservatorio Professioni Digitali e Lavori Ibridi, 2019

The polarization of the labour market and subsequent marginalization of certain type of workers is not the only effect of the current times. This polarization trend comes with another face of the same coin. The firm and the younger cohort of workers are ready to embrace change and to revolution the way of doing business, and they might be valued in the more innovative and modern companies. Yet, the other problem comes from the

fact that companies are still based on a seniority system: Baby Boomers and Gen X-ers are more likely to be employed in managerial roles, or to own, or run companies. The necessary change of mentality needs to come from the upper management and above, and then implemented throughout the firm. Workers alone have to follow the lead of Baby Boomer or Gen X-ers, and this often results in poor implementation of practices, when regarding the change firms have to undergo, in order to keep up with the change of the environment.

3.3   The core of analogue: Baby-Boomers

Baby-Boomers are the oldest cohort of workers in the firm as of right now. People who belong to the Baby-Boomers cohort were born from 1946 to 1964, meaning they now are 56 to 75 years old. This generation is the one who benefitted from the economic boom of the 1960s. This shaped the way they look at life: the belief that they could do anything they set their mind on is typical of the Baby Boomers as a generation. When talking to their relationship with the work and the workplace, Baby Boomers are characterized by being hard-workers, willing to work for a long period of time to make the difference. They have a strong work ethic, they value personal growth, hard work, individuality and equality of sexes (Bell, Narz, 2007). Their involvement in the firm and their own personal gratification and growth is their self-motivator. Being the oldest cohort of workers in the firm, and usually in the top positions of companies, Baby-Boomers are technology-acquired: they were not born in an era when digitalization and digital technology was the main mean to communicate or do a job. The principal method of performing activities was based on analog instruments: sheets, calculators, landline phones and face-to-face meetings were the way they worked for years and performed satisfactorily. The advent of digitalization and digital technology is sort of a shock for them: they have the double difficulty of learning and unlearning organizational practices and ways to perform in their job. Baby-Boomers have been taught managerial practices which needed to be implemented and performed in order to succeed at their job. Digital transformation revolutionized the way they behaved in the company, making most of their practices obsolete. They have been dealing with the double difficulty of unlearning these practices and replacing them with the new way of doing work. The main change for this cohort is using digital technologies to do tasks they used to do analogically. This is not only a technical, managerial issue, though. First and foremost, Baby-Boomers need to shift their mindset and

actually put themselves in the positive mindset of having to deal with technology and new organizational practices. It is a change required to them, because firms are getting more and more digital as the months pass, and they are requested to keep up with the ever-changing times. This cohort of workers is one of the most important now working in the company: they are going to retire in the near future, which means that their tacit knowledge could be lost with them, if the firm doesn't find the way to properly manage the knowledge transfer between different generations. As the oldest cohort of workers, their tacit knowledge is fundamental to make the organization continue to properly function the way it always did, albeit with organization and management differences. However, research on Baby Boomers done in 2004 pointed out that at least 80% of them kept working part-time after retirement (Baby Boomers Envision Retirement II, 2004). Along with the postponing of the retirement age, the not-definite retirement of Baby Boomers is not something to entirely frown upon. It could help the transmission of tacit knowledge along to the younger employees, if the Baby Boomer decided to work as a mentor in a part-time way, after his official retirement. This solution would be, however, subjected to the same difficulty Baby Boomers face when still working in the firm. They should adapt to other types of organization and to a more flexible work environment. They should thoroughly accept that their new role would be the one of mentors instead of what they were used to in the firm, which is likely to be an important managerial role or something of equal importance. It is a change that needs to happen on a cognitive level first and foremost, as one of the hardest challenges for older, more traditional workers is to come to terms with the change the market and the business is undergoing. Digital technologies play an important role here as well: it is more and more frequent to use digital means of communication instead of the more traditional way of meeting, such as in person. Especially after the COVID-19 pandemic, the adaptability to new routines, to new types of doing work and to new types of communication is more and more important. Online meetings have become the norm, but at the same time, the flexibility of being available for either an online conference or for a meeting in person needs to be properly part of every worker's attitude. It is not easy to switch to this mindset even for younger generations, because these uncertain times do take a toll on workers and on their productivity. However, the pandemic only pushed the adaptation of digital technologies over the thin

and ephemeral line between about-to-happen and effectively happening in every industry that could sustain it.

3.4   In between ICT and digital: X Generation

Generation X is the generation of people born from around 1965 to 1980. This generation is the first one to witness the duality of income in their family, as working women become a reality only with the Baby Boomer generation. This reality put them into a positive optic of one day getting to the same position as their parents: children of the '80s, they were optimistic and believed that getting a degree was going to be what they needed, and that afterwards, everything was going to work out on itself – like it happened for the generation of the Baby-Boomers (Rosina, 2010). Yet, the reality of their future turned out to be very different from the situation their parents were in. As the economy got more and more saturated in Gen X-ers' young adult years, they simply waited for their turn in silence, waiting for their chance to arrive. Given that the Baby-Boomers are still working, Gen X is still waiting for their turn to take matters into their hands and finally getting to the place they always thought would be theirs. In their young years, they had little will to change the system that got them stuck into waiting for almost their entire careers. This non-decision of taking the matter into their hands and changing things was a problem highlighted since the mid-2000s, and that it now shows its results in the very different approach to work, from the adjacent Generation Y. Gen X-ers are self-reliant, optimistic and confident. They value education and independence (Bell, Narz, 2007), and they work for improving their lives. Parenthood is important for Gen X-ers: they manage to have a good work-life balance because they have worked hard throughout their life in order to reach the point of easily being able to provide for their families, and spend as much time with them as possible (Rise, 2019). They do not have a strong sense of loyalty and are specialized in different skills, which they are willing to take to the employer who best suits their needs. Those who have not reached important positions in the firm are still waiting for the turnover and the retirement of Baby-Boomers in order for them to take the lead of what they feel as righteously theirs. The issue comes from the advent of the digital transformation and the need for the businesses to both change the way they always used to run and place workers who would be up to the task of handling change into the most important places in the organization. Gen X-ers' independence, self-reliance, self-sufficiency, resourcefulness, and adaptability (Rise, 2019) makes them the potential candidate to the

position they have always aspired to. The difficulty comes from the fact that another generation could be a better fit for those roles, that is Generation Y, or Millennials. This is because of the digital transformation of the firms, but also because of the way they are used to see work, and have seen work for all their lives. Gen X-ers were not raised with digital technology in their lives: unlike Millennials, they are characterized by toeing the line that separates information and communications technology (ICT) from the digital technologies of the most recent years. Gen X-ers do have the characteristics that allow for a positive attitude towards change of the workplace and digital technologies, but their history record does not play to their favor. The going with the flow of their life does not bode well to the notion of having to change up the way they have always worked in the firm, and to accept new organizational forms. However, their position was not the easiest to be in: in their young adulthood, the economic system was working for their parents, and it is only logical to think that it would eventually work out for them as well. The independence and adaptability that distinguished them from the Baby-Boomers is another positive factor: Gen X-ers are not used to strict, unchangeable routines and structures. The adoption of digital technologies in the firm has made them learn how to use them and understand them. This has been a change happening for the most recent years, which did not see Gen X-ers adverse to embracing change. The recent COVID-19 pandemic forced them to adapt to new ways of working even faster. Gen X-ers have learned how to perform activities in a completely different way from the way they were used to, and they managed that with little resistance. Their flexibility helps them to embrace changes and challenges, diversities, and this is shown by their attitude towards digital technology and digitalization. They are working hard to learn how to properly manage the change that has been happening in the firm. They are a learning generation, but this might not be enough to secure them the position they aspire to: Millennials are the first generation to fully experience digital technologies in their lives. They have less struggles with change in comparison with Gen X-ers, and this brings the firms to the delicate decision of who to "put in charge". Gen X-ers have been waiting for their entire life for the Baby-Boomers to retire, and when this time seems to become imminent, they have another generation as their enemy, which is Gen Y.

3.5 Becoming hybrid: Y Generation

Y Generation, or "Millennials", is the first generation to fully experience the change from "the way things *were* made" to "the way things *are* made". The term Millennials refers to the group of people who were born between 1980 and 1996. This cohort of workers represents the newest and fastest-growing segment of the actual workforce. They are the first generation who faces digitalization and digital transformation as a totally positive change from the way things used to be made. They are comfortable using technology and are the first generation to speak up and bring forward the change they want to see in the firm. They are skilled in the usage of digital technologies and social media: they are capable to manage IT tools, they are always on-line, looking at the technology as an integral part of their lives. Millennials are pragmatists and place high value on positive reinforcement, diversity and autonomy (Lancaster, Stillman, 2004). They value teamwork, personal productivity, self-management, personally fulfilling work and social consciousness (Meyster, Willyerd, 2010), and are more willing to travel for work than the previous generations (Henderson, 2012). When the Millennials workers find themselves in a subordinate position, they show their positive qualities, like team working. In that context, they are highly motivated to have a positive impact on their organization: this favours open and frequent communication with their supervisors. Communication plays an important role, because it enables information sharing between generations, and explains the goals that they are called to achieve. In addition, the interactions and relationships within teams in the workplace have a huge impact on both workers' productivity and their job satisfaction. More and more Millennials have become self-confident; however, in some cases, they still lack the work ethic that is shared by older employees. They are much more attentive towards digital technology and digital issues than the previous generations: they are the first generation to truly be born surrounded by the change happening around them. They are on the receiving end of digitalization and the change inside the firm. They have been the "youngest" generation until very recently, and they brought into the labour market the new competences, typical of the digital workforce: the vast majority of them are digitally fluent, or literate, and those who are not, they are on their way to learn. Millennials are characterized by a high level of learning to improve themselves. They are more attracted to jobs which provide career progression and advancement opportunities than other generation cohorts (Wong et al., 2008). They know that the economy is not what it

used to be, and have different expectations from the Gen X-ers and Baby Boomers. They expect to work hard to achieve professional development, and at the same time, they bring forward changes they would like to see in the company and expect others to listen to their ideas. They value communication and are very comfortable with diversity, flexibility, challenging projects, and earning their place (Bell, Narz, 2017). Millennials have work motivators, values and attitudes that are different from the previous generations. Job security becomes less important, while workplace fun increases in importance: less clouded by prejudice, they are more likely to show "out-of-the-box" behaviour and challenge traditional norms. One of the most important motivators for Millennials is the immediate feedback on what they do, and recognition if they task was done correctly. Being very keen on communication, their value of recognitions and feedbacks does not come as a surprise: they are as likely to give feedback and offer recognition, as they are to receive them (Woodward et al., 2015). Millennials are also more likely to change job than the previous generations: they want to do what they are passionate about, for someone who they can admire and look up to, and they are not afraid of change if it means that what they may find is better than what they had left. Their preference of a present, supportive and caring leader is reflected in the way they are likely to provide feedbacks and show recognition, but also in the way they would act if told to teach their equal or even an older worker. They may not have the relational abilities to be leaders quite yet, as the youngest Millennials have not entered the workforce yet and the traditional hierarchy of companies associates important positions to age and seniority. Yet, they are shaping up to be good leaders, and the organizational structures that allow them to mentor others, such as Agile, has Millennials expressing their full potential if free to pass on what they know, in order to improve their and their coworkers' performance outcomes.

3.6 Born hybrid: Z Generation

Generation Z is the latest generation that is going to enter the workforce in the immediate future. They are people born from the latest 1990s to the end of the first decade of the new millennium. The Pew Research Center defines Generation Z as people born from 1997 onward; University of California marks their birth year from 1997 to 2013. They are the first generation to be born with digital technologies fully implemented in every aspect of their life. They use technology for school and for recreational times; meaning that they spend more of their awake time connected than not. Yet, while this generation

uses and is comfortable with Internet, social medias and technology, this does not mean that they are necessarily digitally literate. Research shows that out of 42,000 fourteen-years-old, only 2% were sufficiently proficient with information devices to be labelled as "digital literate", and only 19% could work independently with computers to gather information and to manage their work (International Computer and Information Literacy Study, ICILS, 2018). A portion of Gen Z-ers take digital technology "for granted": they do not put effort into fully understanding how it works. However, this latest generation is certainly more digital-positive than Baby Boomers or some Gen X-ers, meaning that they are likely to become specialized in digital-related university studies and jobs. Digital literacy is not just something people are born with; it is not something that people either have or do not have. It requires application and the positive mindset of actually understanding how digital technologies work. For Gen Z-ers, though, this is very much easier to achieve than for other generations, such as Baby Boomers or Gen X-ers. The environment this generation is growing up in is permeated of digital technology, and it is likely that their parents are either Millennials or late Gen X-ers, who both are quite digitally competent on their own.

The first Gen Zers are graduating in the most recent years. They are likely to become the most requested type of workers, because of their high-level of digital specialization and digital literacy. Countries with the highest level of international high-skilled workers, such as Switzerland, Singapore, the United Kingdom, the United States and Sweden (KDM Engineering, 2019) are more likely to attract even more Gen Z-ers than other countries. Gen Z-ers are more likely to travel abroad to find a job that satisfies them: on the one hand, companies should take into consideration the idea of attracting and retaining this type of workers. On the other hand, Gen Z-ers are the most inexperienced generation amongst the four. They vast majority of them attend university, which also means that they are less likely to having worked before applying for their first job after university. This dichotomy means that while this generation has the potentiality to bring to the firm digital literate employees, it also requires the firm to put in the effort to include this generation in the culture of the company and foster integration among the different generations.

In companies, Gen Z-ers consider transparency, self-reliance, flexibility and personal freedom as non-negotiable aspects of working in a firm (Bascha, 2011). They expect to

be able to respond and to be informed: communication is the most important aspect of this generation. They believe conflicts should be resolved by communication, and take equality and inclusiveness to heart. Communication also takes the path of results evaluation: Gen Z-ers expect to be assigned tasks that suit them in order to prove themselves, but at the same time their work has to be recognized in order to foster a positive attitude (Mihelich, 2013). Being the youngest generation in the firm, Gen Z-ers wants to be taken seriously and want their ideas to be heard. This means that they consider the workplace to be more about ideas and contributions, rather than about age and hierarchies (Schawbel, 2014). They are strongly moved by ethical values rather than money: they prefer working for a leader with honesty and integrity, and they prefer to work in organizations which take environmental and social issues to heart (Middlemiss, 2015). Gen Z-ers prefer to work in an environment which fosters mentoring and learning opportunities, given that they feel like their education did not give them all the necessary tools to deal with real life problems. They also feel like technology has to be an important part of their workplace, in line with the digital literacy mindset (Bridges, 2015).

3.7   Similarities and differences among generations

We have seen the principal characteristics of the four different generations that are currently coexisting in the firm. There are bound to be differences, as well as similarities, among these generations. We try to analyse the principal ones as follows.

The most salient point of difference between the four generations is the attitude towards technology. Young digital natives are more comfortable using communication and digital technologies: Millennials and Gen Z consider themselves more experienced than older generations. Even Gen X is more technology-savvy than Baby Boomers: the oldest cohorts are less comfortable with technology (Gursoy et al., 2013). Some Gen X, Millennials and Gen Z value the use of technology in the workplaces as one of the most important factors to consider, while older Gen X and Baby Boomers are more resistant towards digital technologies on average. However, the youngest cohorts of workers are able to properly manage work life and personal life issues via technology, an ability that is not to be taken from granted, but that is becoming more and more common as time passes.

Similarities can be seen in the way different generations view compensative salary and security of jobs. Those are deemed as important by each generation, although studies

show that Millennials tend to value job security slightly less important than Gen X or Baby Boomers (Lub et al., 2012).

The younger cohorts of workers tend to value jobs that let them express their values more than older cohorts (Sullivan et al., 2009). Millennials value enjoying their work more than the previous generations: whereas for Baby Boomers and Gen X, the most important part of their job was the respect of rules and codes of conduct, for Millennials, the most important part of their job is doing something that really matters to them, that they feel matters for their values and their community. For Millennials, doing a job they like in a good workplace is the key for a balanced and healthy work life. They are also keen on putting importance to communication: unlike the previous generations, Millennials believe that feedback and communication is one of the most important motivators.

Younger generations of workers also prefer jobs which allow them to be promoted more than the older cohorts. This derives from the knowledge of Millennials and late Gen X-ers that the economy is different from what it used to be for the youth of Baby Boomers. Baby Boomers are children of the economic boom of the '60s, but they are the only generation who benefitted from it. Generation X believed things would work out for them the same way it happened for Baby Boomers, but that turned out not to be the case. Millennials never grew up with the knowledge that the flourishing economy was going to help them if they did not put efforts into their work life and education. And all Gen Z experienced is the economic crisis in 2008 and the subsequent struggle to recover from it, only to be hit from the COVID-19 pandemic shortly after. Hence, the youngest cohort of workers find that stability and good salary are not the most important factors to consider; they rather prefer the opportunity to learn and to make progresses in their career, so that if needed to, their knowledge and competences could easily allow them adapt to change, either inside the same firm or outside, in other companies.

Related to the previous point, the younger cohorts of workers value flexibility and balance as more important than the oldest generations. This is a trend which has been shifting, as the older generations are becoming more interested in the balance between personal life and work life than before. This could be a consequence of the oldest Baby Boomer retiring: Gen X has always expressed the desire for having a good, balanced work life and personal life, and Millennials and Gen Z value this as one of the most important aspects of the job.

Millennials tend to consider work values as more important than the previous generations did. It is important for the youngest cohorts to do a job that is important to them, that reflects their own values and ideas. The importance of job satisfaction for Millennials is also one of the causes of the higher job turnover of this cohort, in comparison with the previous generations.

We can come to the conclusion that each generation of worker is unique, yet similar to the others. The differences among them seem to be more than the similarities; they are, after all, the personification of values, beliefs and necessities of half a century. However, they are all in the same company, and they have to coexist peacefully. In fact, managing these different generations together has the potentiality of obtaining the most out of the companies. The main focus of firms is to make these generations coexist; on the other hand, their complementarities favour their coexistence. Modern organizational structures can be the solution to this problem, but that is not enough. Each generation brings something to the company that cannot be replaced: this opens the issue of retaining the knowledge of the oldest cohorts, who are close to their retirement age.

HOW TO MANAGE GENERATIONAL CO-EXISTENCE

4.1 Introduction

As we stated in the previous chapter, there are four generations of workers in the labour market, which have to cohabit in the same firm: Baby Boomers, Generation X, Generation Y, Generation Z. Each of these generations has a different view of work and different capabilities and expectations. Ten years ago, Alessandro Rosina (2010) stated how the variety of generations in the firm was rather a problem than a positive aspect, from the point of view of said generations. In particular, Gen X-ers have been waiting for their career to arrive to the point where they would replace Baby Boomers in managerial roles. However, that time has not come yet: companies need to manage four different generations, and at the same time, they need to remain competitive in an ever-changing environment. The implementation of different types of organizational structures can help with the co-existence of these generations. Yet, Gen X-ers and especially Baby Boomers look at the flexibility and change as something to fear, instead of something to embrace. On the contrary, for Millennials and Gen Z flexibility represents the standard, and they actively search for companies which can provide those two things. Organizations are facing four different generations, each with a specific idea of what working means, and they have to figure out ways to make them coexist with each other. It is not easy to manage: in example, if we take digital transformation into consideration, the four generations of workers have different approaches to it. The older generations see it as a hassle, as they have to unlearn most of the ways they have always done work, and have to learn new ways of performing activities. The younger generations, on the other hand, cannot fathom a reality where digital technologies do not play a fundamental role. The challenge is to

make these different generations co-exist, and to maximize the value of these generations working together. The generational diversity in firms is actually a very valuable resource: each cohort of workers complements the other, and skills that one is lacking, the other has in abundance. There is only one thing to improve, and that is the tensions among the different generations. This chapter offers some insight on how to overcome these difficulties. The second paragraph is related to the managerial practices of mentoring and reverse mentoring. The third chapter is a brief interlude about how the organizational hierarchy is disappearing from the companies. The fourth chapter provides performance measurement systems to help evaluating the employees both for a traditional firms, and for innovative organizations.

4.2 Mentoring and Reverse Mentoring

Companies nowadays face the great challenge of conciliate up to four distinct generations of workers, who differ in age, mentality, skills and competences. It is not the easiest task, as each generation has something unique, that often the others do not have: tacit knowledge, competences, technological skills, innovative ways to think of problems, adaptability. It is a very imminent issue, because the Baby Boomers generation is going to retire soon, and there are chances that the firm could very well lose some of the best workers they have. Tacit knowledge is the most important thing that could be lost with this generational change. The issue of the intergenerational knowledge transfer is one of the most impending problems firms have to face. In around ten, fifteen years, this cohort of workers leaving the workforce could be a problem, if the management does not do something to retain the tacit knowledge that could go lost. In order to solve this problem, generations have to coexist not only passively, but also actively. If asked to teach new employees their know-how, their competences, something they spent their entire work life perfecting, seniors would most certainly refuse. They could agree to a direct guideline from the management to instruct juniors, but they could very well leave out the details that could tell the difference between textbook knowledge and empirical, practical knowledge. This problem might become especially evident if the management not only asked seniors to mentor new employees, but also if they requested younger employees to mentor seniors as well. Millennials and even Gen Z have on their own side the digital fluency, which is a fundamental attitude to have towards the firm and its processes. Baby Boomers could need to improve their performance by learning some tips and tricks of the

younger workforce, in order to remain an active asset of the firm, instead of a neutral worker, or worse, a potential liability.

For this purpose of intergenerational knowledge transfer, both traditional mentoring and reverse mentoring are two important practices that could lead to an ideal, inclusive workplace. Firms have been searching for ways to manage the differences in the company, while at the same time dealing with changes in the industry and in the labour market. Mentoring and reverse mentoring offer the opportunity to the firms to manage the intergenerational knowledge transfer, leading to the preservation and sharing of as much knowledge as possible. They are not the easiest practices to implement, especially when talking about the reverse mentoring, where a younger employee should teach and mentor a senior employee – mostly regarding digital technologies or practices. The attitude of Baby Boomers, as well as some Gen X-ers, make it difficult to have a smooth process. It is in the best interest of the company, as well as of all the employees, to put aside personal issues and have a positive attitude towards these managerial practices. One way to overcome this cognitive problem is to overtly expect mentoring or reverse mentoring from the employees. Companies can state in their job offering that mentoring is one of the outcomes of a specific job, perhaps by increasing the job salary as well. This way, workers who enter the firm – or accept to prolong their contract – know that they are required to mentor younger generations, or reverse mentor older generation, depending on which capabilities they have and that they could teach.

4.2.1 Traditional mentoring

The most widespread type of mentorship, nowadays, is traditional mentoring. Generally, mentoring is identified as a developmental relationship where senior professionals assume a helping role with junior professionals, who comprise the next generation in a given field, and is often hierarchical in nature (Satterly et al., 2018). Mentors offer emotional and psychological support, assistance with career, professional development and role modelling. They have more expertise in determined fields, which they transmit to mentee. Traditional programs, though, are typically planned, assigned, maintained and monitored by the organization, who keeps a hierarchical relationship between mentors and mentees (Harrison, 2017). Usually, in traditional mentoring, information flows in one direction: senior employees mentor younger mentee. This method is vastly used in hierarchical or-

ganizations. At the same time, it can be used in more innovative firms, where the retirement of the older Baby Boomers is impending, and whose tacit knowledge the company wants to preserve. It makes for an important safe mentoring model, with a great breadth of literature and empirical cases to learn from, but it does not acknowledge the need for mentors to be mentored in turn.

4.2.2 Reverse mentoring

Reverse mentoring is defined as the pairing of a younger, junior employee acting as mentor to share expertise with an older, senior colleague as the mentee (Murphy, 2012). It is a concept first introduced by the Chief Executive and CEO of General Electric in 1999, Jack Welch. He introduced a formal reverse mentoring program when he ordered 500 of his top managers to find young employees who could teach them about the Internet. Reverse mentoring is an innovative and cost-effective professional development tool that capitalizes on building bridges between generations: within the generational context, the reverse mentoring relationship is between a Millennial mentor and a Gen X or Baby Boomer mentee (Satterly, 2018). For senior employees, this structural role reversal presents unique challenges, including the need to give up some control of the process and demonstrate their willingness to learn from their mentor (Kunze, 2017). However, Millennial mentors tend to be less concerned with status differences than the previous generation. Thus, it is likely that mentors and mentees approach their unequal status from different perspectives. Building trust in a reverse mentoring relationship is critical, since knowledge is absorbed faster and more completely when the connection between mentee and mentor is high quality. Both parties should feel the need to embrace knowledge sharing. Reverse mentoring is a both-sided type of mentoring practice: management of firms might want to encourage reverse mentoring by adding incentives or recognition towards each successful outcome. Reverse mentoring capitalizes on generational similarities and differences by encouraging organizations to recognize, understand and build strengths of generations. It is expected that the development of one-on-one relationships should help reduce assumptions and negative stereotypes and even highlight similarities. As far as the mutual exchange of know-how is concerned, reverse mentoring is theorized to be one of the more apt management tools that yield one of the best outcomes. Murphy theorized that in reverse mentoring junior mentors may grow in leadership skills and organizational

knowledge. At the same time, senior mentees may increase content knowledge, gain technical skills, and develop valuable cultural insights from direct interaction with younger generations, such as Millennials.

4.3 Hierarchy perception

The role of hierarchy is strictly linked to most of the topics discussed thus far. Organizational structures are becoming less about hierarchy and more about the value of every individual inside the company. Along with this transformation of organizations, the generational change is also helping the progressive disappearance of hierarchy, if not from the company yet, at least from the mindset of workers. Younger cohorts of workers are less bothered by the traditional roles inside of the company. The top-down structure does not respond well to market changes, and Millennials, along with the younger Gen X-ers, know it. They are more likely to find companies who have more innovative organizational structures. Agile and Holacracy are often accompanied by different workplaces from the traditional, tailor-made office. Open spaces replace the individual offices: team working is favoured by the absence of walls and the possibility of rotation and change of workstations. While the novelty of open spaces gives Millennials the sought feeling of freedom and flexibility, it may dampen the enthusiasm of older generation of workers. Used to have a personal office to work in, especially in the higher job positions, Baby Boomers and the older Gen X-ers may feel like the innovative workplaces are not as serious as the private offices. They may see at the open space as too informal to be a proper workplace, and this might affect their productivity or their mindset. If this change is accompanied by the practices of mentoring or reverse mentoring, Baby Boomers may feel even more threatened. Supervisor-subordinate relationships always involve an emotional component and usually feature a mix of positive and negative emotions. In comparison to same-age or older supervisor-younger subordinate relationships, studies demonstrate that there is a higher frequency of negative emotions in age-inverse supervisory relationships. These negative emotions derive by status incongruence and violations of career norms (Kunze, 2017). For Baby Boomers, these organizational practices are not simply a matter of choosing the best workplace in which to be productive. They feel like those practices are aimed to undermine their seniority and authority, which leads to the progressive increasing of frustrations and performance loss. However, the older generation of workers need to shift their focus towards the good of the company: implementing Agile or any other innovative

organizational practice is one of the ways the firm can respond to the changes happening in the environment. Mentoring and reverse mentoring are needed in order to help organizations improve and develop: training newer employees is beneficial to the firm on the long run, especially after the retirement of the older generations. Mentoring and reverse mentoring are also ways to preserve knowledge, which could potentially be lost in the generational change. The idea of a fixed and permanent hierarchy will be gone within a decade in most progressive companies (Hamel in Economictimes, 2015). It is not a fixed trend yet, as it is already happening for the most young and innovative firms, like Spotify. It is, however, the destiny of hierarchy for firms which are looking forward to have competitive advantages in the future.

4.4 Performance measurement systems

> «A performance measurement system can be defined as the set of metrics used to quantify both the efficiency and effectiveness of actions» (Neely et al., 1995).

Traditional organizations, which have been the norm for Baby Boomers and Gen X for years, have consolidated performance measurement systems. These generations have always been used to being evaluated in certain ways. However, with the advent of the new types of organizational structures, performance measurement systems have been evolving as well. It is a relevant theme in the current environment, because it represents another change firms and employees need to adapt to: firms might find that traditional performance measurement systems (or PMS) are no longer the best way to evaluate employees. We analyse the traditional PMS, as well as the Agile PMS. Traditional performance measurement systems have been relevant for years in the past. Agile performance measurement systems, however, are relatively more recent. They embody the new types of assessment used from firms with a more innovative type of organizational structure – such as Agile.

4.4.1 Traditional PMS

The traditional performance measurement systems have been the ones traditional firms have been implementing for years. Those are the PMS the older generations are used to: this means that Baby Boomers, Gen X-ers, but also Millennials tend to feel more secure when evaluated by these metrics. Providing performance assessments is important for

employees, in order to encourage positive work performance and to determine weaknesses. The assessments need to be enforced regularly: it is usually portrayed every six months, or every year. Each firm might use one or several types of performance measurement systems, in relation to which are more aligned with the goals of the company. However, it is important to base the PMS on positive reinforcements instead of simply pointing out the things to be improved. Positive reinforcement encourages workers to have a positive attitude, and it usually makes them feel motivated to continue bringing value to the company. They need to be of clear interpretation, in order for employees to properly understand the evaluations.

MindMiners wrote an article (2019) which lists the principal methods of performance evaluation. We report the most relevant ones as follows.

In the most *traditional* performance management system, the manager discusses with the employee the performance of a specific period of time, usually one year. The employee is evaluated by the observations of the manager, and it often results in a raise of salary if the performance has been positive. This method, however, may result in a loss of focus from the employees, who might feel like well-performing only to receive an increase in salary, instead of being properly motivated to perform in order to produce as much value for the company as possible.

Another type of PMS is the *self-assessment*. It is performed in two steps. First, employees reply to a questionnaire about their performance, identifying strengths and weaknesses. Afterwards, the employees meet with the manager in order to discuss their performance and to know what to improve. Self-assessment is used to encourage employees to take responsibility for their own performance by self-evaluating and acknowledge their own successes and failures. Through this type of PMS, the evaluated can interiorize the best way of improving: this leads the employee to set new goals to achieve, and his or her attitude eases continued growth.

Team assessment is another type of PMS. Team assessment is usually implemented when a specific achievement is requested from an entire team, rather than a specific individual. It is also useful for evaluating a team that is not working on a single project, but which is required to work together for the well-being of the company. Team assessments are useful

for making adjustments in said teams, for improving workflow and the allocation of resources, as well as checking the team morale. These considerations tend to maximize the achievement of goals.

Graphic rating scale is another type of PMS. This is one of the simplest methods of performance evaluation. For every employee, a histogram type of graphic is created, with the variables to be evaluated on one axis, and on the other a number which goes from one to five. This method is easy to produce and to understand, as it gives the most immediate feedbacks on certain types of variables. However, its strength point is also its limitation, as the simplicity of this method is under adequate, and often requires other types of performance evaluation systems as well.

Another type of PMS is *360-degree rating*. It is what usually accompanies the graphic rating scale measurement system, and it represents one of the most complete PMS. It consists in the evaluation of the individual by not only the managers, but also by clients and the different people he or she interacts with in the company. Everyone is called to evaluate the candidate, and at the end, a comparison between the considerations and the individual generates important feedback. This PMS is especially important in big companies, where employees are more likely to feel not very important for the firm.

The PMS of *goals and results* has more of a quantitative approach. The objective is to identify whether the employee is meeting the expectation of the company. Each variable is evaluated in a numeric scale. This type of PMS can also be used to evaluate team groups.

4.4.2 Agile PMS

Agile performance management systems are based on a different type of organizational structure, and in particular on fast deliverables, which are typical of Agile-based organizations. These PMS are not easily measured, because they are not as straightforward as the traditional ones.

The performance assessment needs to be implemented in every step of the organization. Personal performance evaluates each person and their contribute in the project. For Agile, managing to individuate individual tasks is more difficult than in traditional projects. As people take on multiple tasks and roles, establishing which particular tasks are carried out by each person almost goes against the meaning of Agile. Individuals, however, expect to be evaluated, and the challenge for Agile-based organizations is to manage to produce

PMS tailored for each worker, as well as team and department. Since it is based on team projects, Agile also needs to measure project performance. Project performance measures the progress achieved for specific deliverables and projects. The most important KPIs for project performance are the time and effort put into a project, in comparison with the deliverables and value created (Gregory et al., 2015). Joel Bancroft-Connors (2017) listed four main KPI to measure performance in Agile based organizations. We report them as follows.

The first KPI is *cycle time*, which measures the productivity of each team. A cycle time is set when the team starts working on something, and finishes as the team stops. For each time cycle, the team carries out a certain amount of activities. For a set project or deliverable, the shortest the time cycle is, the more productive the team is. For a set time cycle, a higher the amount of activities that get done in that time frame means a more productive team.

Another KPI for agile is the *escaped defect rate*, which measures the overall quality of a specific project, and usually connects the customer satisfaction with the team. Escaped defects are measured by the number of problems found in the deliverable. The lower the escaped defect is, the higher the quality of the deliverable.

Planned-to-done ratio is another KPI, which measures the predictability of a team. This helps to see which teams are more productive: for a set backlog of a specific number of products, the team which manages to deliver the higher number is the most productive. It is easy to measure, and the ratio between the committed activities and completed activities gives a percentage of the overall team productivity.

Happiness metric is another KPI, apt to measure the health of teams, their stability. It creates awareness and puts the other KPIs into perspective: it recognizes potential burnouts or can indicate the potential increase in the team performance.

These four KPIs are interrelated to each other: the first two are more quantitative variables, which are integrated with a more immediate impact given by the planned-to-done ratio. Each of these three KPIs is overseen by the happiness metric, which indicates the team need for change, or serves as an indicator that the team management works well and is properly managed. Agile PMS are more dynamic and innovative than the traditional PMS, and while they may request an initial period of adaptation of workers, they are

likely to give more apt information. Integration between the two types of PMS is not discouraged, but rather encouraged.

4.5 Managerial implications

In lights of what we have analysed thus far, generational co-existence in firms is not only possible, but it also a valuable resource for the company. We have analysed three different aspect of this cohabitation of generations.

The generational point of view, through mentoring and reverse mentoring, highlighted how the intergenerational knowledge transfer is something to actively research. Older generations need not to worry: each cohort of workers has their own unique capabilities, which are specific and not easily replaceable. Even though the practice of mentoring and reverse mentoring is aimed to shorten this knowledge distance among generations, it is not the final solution. Continuous efforts need to be implemented by every point to manage to keep the flow of information from stopping. At the same time, management has to deal with negative emotions which arise from the relationship of supervisor and subordinate, in order to have a positive work environment.

The organizational point of view highlighted how the classical organization of firm is disappearing. Hierarchy is not going to be eternal: the most innovative firms are already abandoning the traditional hierarchy, and are aiming towards more flexible and responsive types of organizations. Agile and Holacracy often bring with them the transformation of the workplace, from a closed-off space with personal offices, to an open space, where teamwork is more easily managed.

The last point of view we analysed is the measurement of performances. Performance measurement systems are needed in order for the management to see the weakness points of the employees and steer them towards a more efficient way of performing. At the same time, PMS are an important source of recognition and feedback for employees. Traditional PMS continue to work efficiently for hierarchical organizations, but Agile and other types of innovative organizations are in need of other PMS as well. Among the other ways of analysing performances, the *happiness metric* is what ties everything together. Management should pay attention to the morale of the workers: it is, as we saw, one of the most important factors of achieving a good performance and producing value. High morale is what moves employees to work together towards a certain end. It is important for everyone: each generation might have different perspectives on what it is the variable

they value the most among all the aspects of their work, but every generation – just like every person – has one final purpose, which is happiness.

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