

LIVE WHEREVER YOU WANT AND WORK WHERE YOU'RE LIVING

Deliverable 1.2.1
Remote work in the alps:
Readiness, opportunities and barriers

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INTRODUCTION

The activity A.1.2 was a study of the target territories' of AlpSatellites. Aosta Valley University led this activity. In each country (Italy, France and Austria) a study was carried out to map the level of readiness for remote working of the three target mountain areas (Unité des Communes Valdôtaines Evançon [Aosta Valley Region, Italy], Pays du Grand Briançonnais, des Ecrins and du Guillestrois/Queyras [France] and the Municipality of Gemeinde Doren [Austria]). The specific objectives of activity 1.2 were:

1. to construct a theoretical framework to inform the development of the AlpSatellites project;
2. to map the specific characteristics of the three target areas (collecting data such as: demography dynamics, main economic indicators, labor market dynamics, technological infrastructures, geographical features, including climate information, the potential space for coworking, services, housing market dynamics, public laws and HR policies, demand & supply, job profiles and digitization, workers' digital skills; attractiveness for tourists) which helps to identify the enabling conditions for remote working and for coworking spaces (the characteristics of each target area will be included in Deliverable 1.4.2);
3. to analyze the needs for remote working and coworking spaces (competences and digitalization of work) in the local community, the companies (employers), the workers (employees) and the required characteristics of AlpSatellites, as potential spaces for remote workers;
4. to identify the barriers and opportunities related to remote work and to the use of coworking spaces (AlpSatellites).

The research methodology was co-designed by the University of Aosta Valley together with Fachhochschule Vorarlberg (FHV) and Aix-Marseille University and then shared and discussed with all the partners involved in AlpSatellites at the first Transnational Partners' Meeting (TPM) in November 7-9 in Italy and during several on-line meetings. The study was a collaborative project; however, each university developed it with slight variations tailored to the specific needs of their respective territories.

In the following pages we will present:

1. an interdisciplinary literature review on remote work and coworking spaces. Understanding the very complex subjects of readiness of target areas for remote working and the AlpSatellites project (potentially attractive places for people and businesses) required cooperation between disciplines (such as work and organizational and social psychology, sociology, anthropology, geography, economics and science and technology studies);
2. the comparative quantitative research carried out in France, Italy and Austria;
3. the results of the qualitative study carried out in Italy.
4. the results of the quantitative and qualitative research

carried out in France;

5. the results of the quantitative study carried out in Austria.

The A.1.2 activity was divided into four stages: 1. preparing the field and the research devices; 2. data gathering; 3. data analysis; 4. writing up the research results. These stages were conducted between September 2022 and October 2023. An International Scientific Committee was involved in the different stages.

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1. Theoretical framework

To analyze the need and the degree of readiness for remote work and coworking spaces in three different territories, we initiated the process by conducting a comprehensive literature review encompassing managerial, economic, psychological, and sociological aspects. This review focused on key concepts central to our research, including remote work, coworking spaces, and rural coworking spaces. The insights gathered from the literature review presented below served as the foundation for developing the theoretical framework, which in turn guided the construction of our quantitative research questionnaire.

1.1 Remote work

The backdrop of remote work is constituted by New Forms of Work Organization (NFWOs). NFWOs are characterized by the application of principles and practices within companies that aim to capitalize on the creativity and commitment of employees at all levels to gain competitive advantage and meet the challenges posed by the social, economic, and technological environment in which the company exists (European Work Organisation Network - EWON, 2001). Taskin et al. (2017) propose dividing NFWOs into 4 categories: flexible working arrangements and practices, the emergence of participatory management, new organizational configurations and, finally, the use of communication information technology. The underlying idea is that increased autonomy will

improve the motivation and performance of workers, as it allows them to maximize their abilities (Peters et al., 2014). There are multiple possible reasons for implementing NFWOs in different organizations: economic, organizational, social, and environmental (Ajzen et al., 2015). The first forms of NFWO emerged as early as the 1950s with management by objectives, then gradually with participative management, semi-autonomous teams and remote work. This trend towards flexibility and a growing consideration of workers' needs has been accompanied by the increasing use of New Information and Communication Technologies (NICTs) (Taskin et al., 2017). Today NFWOs provide the background for remote work.

According to the Breton report¹ (1993): "Remote work is a way of organizing and/or performing work carried out on a regular basis by a natural person under the following cumulative conditions: the work is carried out at a distance, i.e. outside the immediate vicinity of the place where the result of the work is expected, without any physical possibility for the client to supervise the performance of the service by the remote worker."

Many other institutional texts have followed: European framework agreement, National Interprofessional Agreement, Warsmann law etc. as far as the Macron ordinances in 2017: "Remote work refers to any form of work organization in which work that could also have been performed on the employer's premises is carried out by an employee outside these premises on a voluntary basis using information and communication technologies. Remote working is implemented within the framework of a collective agreement or, failing that, within the framework of a charter drawn up by the employer after consulting the economic social committee, if it exists."²

Remote Working

Remote working, while not a new phenomenon, has grown strongly in organizations where it was not expected in the past (Robinson, 2020). It is usually described as the flexibility to work anywhere at any time (Kurland & Bailey, 1999).

However, the phenomenon did not catch on as quickly as researchers predicted. According to Pearlson and Saunders (2001), this delay is motivated by three paradoxes of remote work that must be overcome in order for uptake to expand: first, remote work increases both the size and the flexibility of a company. Outsourcing is often used to reduce costs and company size with the benefit of greater internal flexibility within the company, which is often necessary for modern markets. However, in the case of remote work, greater flexibility involves increasing costs and company structure, for example, because some tools must be replicated and able to operate even remotely; the second paradox is that remote work requires greater attention to the needs of individual workers but also to teamwork; finally, on the one hand, con-

trol is increased (for example, thanks to specific software), but on the other hand, there is reduced direct control of managers. Therefore, managers must identify new strategies and perspectives to manage all these apparent paradoxes. Analyzing early remote work studies, Bailey and Kurland (2002) come to similar conclusions, suggesting that managers are often reluctant to implement remote work because they are concerned about the higher costs and reduced control. Indeed, until the beginning of the twenty-first century, there was little evidence of increased satisfaction and productivity for remote work. Although remote work was mainly used by professionals (predominantly men) and office workers (predominantly women), there was an extreme heterogeneity in their motivations and business performance. Reduced commuting distances and family obligations seem to be the most common reasons for preferring to work remotely. The only common element is the manager's willingness to implement remote working within the company.

Paradoxical effects, both for the employee and the organization

Remote working has advantages and disadvantages, both for the employee and the employer. Thus, for employees, the benefits generally identified are: reduction of time spent traveling to and from work, reducing fatigue and travel expenses (Heinonen and Weber, 1998; Taskin, 2003; Scaillerez and Tremblay, 2016); flexible working hours (better work-life balance); and greater autonomy regarding time management (Taskin, 2003). Indeed, remote working allows workers to bypass the usual constraints of having to be in the office during a specific time slot (CEBR, 2018). Remote work has other relevant advantages such as a greater ability to concentrate and less need for recovery (Biron and Van Veldhoven, 2016). The worker perceives more advantages than disadvantages of working at home. In fact, on average, workers are willing to give up a portion of their wages to work remotely (Mas and Pallais, 2017).

For the organization, increased productivity, reduced carbon footprint, and reduced real estate costs are undeniable benefits. Indeed, the reduction of the carbon footprint can motivate companies to opt for these kinds of practices and thus have a positive societal impact (e.g., reduced commuting and pollution) (Ajzen et al., 2015). In addition, remote working can help foster a corporate culture based on trust and have positive impacts on staff interactions and the company's reputation, increasing its attractiveness and potentially decreasing absenteeism and turnover (Bick et al., 2020). Also, some argue that the COVID-19 crisis has strengthened relationships among workers; forced into remote work, employees have revealed aspects of themselves to their colleagues or even, at times, their clients, which they were not accustomed to displaying in the office. This transparency can have a positive impact on trust between these different

¹ <https://catalogue.bnf.fr/ark:/12148/cb35690741g>

² Ordinance on the predictability and security of labor relations, published in the Official Journal of September 23, 2017

actors (Robinson, 2020).

The disadvantages for employees can be numerous: risk of isolation, even neurosis; increase in real work time and real workload (elimination of breaks, informal time, “breathing space”); threatened sense of belonging, risk of atomization of work groups; increased ‘blurring’ between the professional and private spheres. The literature highlights further problems of remote working: for example, an increase in anxiety among workers in relation to the use of computers and information technologies (Staples et al., 1999). Furthermore, even after years of working for a company, remote workers have a poorer perception of inclusion and appreciation as members of the organization (Bartel et al., 2012). This also leads to fewer career advancements for workers opting for remote working, despite being equally productive or more productive than workers in the office.

On the organizational side, there are certainly difficulties surrounding the reduced capacity for control (Lallé, 1999) and the impossibility of introducing remote work without having to thoroughly revise the entire work organization. Thus, this new way of working must be accompanied by new managerial practices in order to reap the expected benefits and avoid the drifts (Taskin, 2006). Further disadvantages are the increase in installation and maintenance costs for the company and cultural clashes, isolation and lack of trust on the part of workers (Cascio, 2000).

Other risks include psychosocial risks, workaholism, over-control of the company, especially electronic (compensating for the impossibility of physical control), failure to cover the cost of remote work equipment, Musculoskeletal Disorders (MD).

A contrasted evolution

We must also consider the issue of the digital divide. On the one hand, although the internet is available in most places, sometimes the quality is insufficient to satisfy the demand of remote workers (Deloitte, 2019). This observation should be taken into serious consideration when studying remote work, its evolution and implementation. On the other hand, companies are not all equal when it comes to the uptake of Internet, digital technology and related tools. Studies have shown that the level of adoption of NICTs (Network Information and Communication Technology) can vary greatly from one company to another. For example, the level of adoption of ICT is lower in VSEs (Very Small Enterprises) than in other companies (Smallbone et al., 2002). Individuals are also not all equal when it comes to adopting ICTs, which is why computer illiteracy is also one of the challenges of remote work deployment, especially in rural areas (Kesteman, 2020).

Work-family balance

One of the key factors driving the decision to adopt remote work is the challenge of maintaining a healthy work-family balance (Toscano et al., 2020) due to the inherent clash between the demands of work and those of family life. Extensive research in the field of work and organizational psychology has demonstrated that work-family conflict can have

significant repercussions for companies, leading to fall in performance and increased employee turnover. Consequently, it is reasonable to hypothesize that embracing flexible or remote work options for workers with families can potentially enhance both professional and personal well-being. However, it’s worth noting that Allen, Golden, and Shockley’s comprehensive literature review in 2015 concluded that remote work may offer limited relief in reducing work-family imbalances. This limitation appears to stem from the increased family responsibilities that remote workers can experience, precisely because they are working from home. Therefore, remote or flexible work arrangements can inadvertently exacerbate rather than alleviate work-life conflicts. This phenomenon applies in particular to women, due to the persisting traditional division of household tasks within the family, as highlighted by Hartig, Kylin, and Johansson in their 2007 research.

Job satisfaction

One of the most extensively studied outcomes of remote work is job satisfaction. Gajendran and Harrison (2007) conducted a comprehensive meta-analysis, culminating in the finding that the average correlation is generally positive, albeit leaning towards the lower end of the spectrum. To shed light on this relationship, it is important to consider potential moderators, notably discretion and task interdependence. Discretion refers to the extent to which workers have control over how they carry out their assigned tasks, while task interdependence concerns the degree to which employees must collaborate with colleagues to effectively fulfill their responsibilities. These factors play a crucial role in understanding the intricate connection between remote work and job satisfaction. Several studies have considered the optimal number of hours an employee should spend working remotely. Around 15 hours per week might appear to be the critical threshold for maintaining a good level of job satisfaction. However, it’s worth noting that findings in this domain are not consistent across all studies.

Identification with the organization and organizational commitment

The exploration of the nexus between identification, organizational commitment, and remote work is a pivotal area of research interest. Numerous scholars have examined whether the adoption of specific remote work modalities affects the levels of identification and commitment among members of an organization. While it’s evident that physical distance from the organization, such as working remotely from an office or another designated space with symbolic value, can potentially lead to a sense of emotional detachment among employees, it’s equally noteworthy that these very elements might be very attractive to certain segments of the workforce, particularly among younger employees, as noted by Sardeshmukh, Sharma, and Golden in 2012. In a notable study by Caillier in 2012, a survey was conducted within the realm of Public Administration in the US, involving a substantial sample of over 20,000 workers. This research sheds valuable light on the in-

tricate interplay between remote work, organizational identification, and commitment. The author observed that workers who very often worked remotely had low levels of commitment compared to those who used remote work less than one day per week. This study suggests a possible curvilinear relationship, an inverted U, in which excessive use of remote work can result in less commitment. De Menezes (2010) has pointed out that conceiving remote work as optional, and not a top-down decision, can influence a positive relationship between remote/flexible work and commitment and the sense of belonging to the organization.

Interpersonal relationship (with colleagues)

Working remotely, particularly when located far from the company's physical premises, can significantly impact the dynamics of interpersonal relationships among colleagues. In many work settings, critical information, knowledge, and resources are often transmitted through ongoing interactions with colleagues and supervisors. Consequently, the prolonged absence of a worker from the workplace can create a psychological distance not only from coworkers but also from the broader work environment and organizational culture. Remote work introduces inherent risks to interpersonal relationships, making it imperative to monitor and manage these risks carefully in order to mitigate any negative impact for both remote workers and their colleagues. Existing literature in this field highlights the importance of implementing robust policies and training programs in this regard. The measures implemented should address issues such as social isolation, reduced access to essential company information, and diminished levels of trust among colleagues.

Employee performance

Several studies have shed light on the potential positive links between remote work and employee performance. Nevertheless, when examining this specific aspect, the existing literature often presents a complex and somewhat contradictory landscape. For instance, one study conducted by Bloom, Liang, Roberts, and Ying in 2015 explored empirically how remote work, under certain conditions, could lead to enhancements in both employee and organizational performance. This research found that even though remote workers frequently reported increased job satisfaction and an enduring preference for working from home, an intriguing paradox emerged: these same workers reported lower rates of promotion compared to their colleagues in the office. Researchers proposed several hypotheses to explain this: 1) remote workers may have less visibility, making it less likely for their positive performance to be noticed by superiors; 2) remote work might hinder the development of crucial social skills that are typically essential for leadership roles; 3) some employees may opt not to seek promotion due to a fear that it could jeopardize their ability to continue working from home. These findings highlight the complex interplay between remote work, job performance and career advancement, offering valuable insights for both organizations and

individuals navigating the remote work landscape.

Conditions for success

From the companies' point of view, for the implementation of remote work to be successful, employees must not abuse the trust afforded to them (Quoistiaux, 2020). This means that if companies choose to give their employees the option of working outside the company walls, employees must use their working time to work. Equally, for this system to work, these employees must feel trusted and valued by the company. Of course, if employees perceive remote working as something imposed and to be endured, it will be difficult for them to find the motivation to respect their working hours and instructions (Peters et al., 2014). In any case, in order to develop remote working, it should be introduced gradually and by choice, involving discussion between employee and employer. This also helps to reduce other risks linked to remote work identified in the literature, such as the lack of exchange and social isolation (IBGE, 2006; Taskin, 2006). Organizations that give their employees the option of working from home or elsewhere must take this risk into account and take appropriate preventive measures. Another risk that companies should take into account is the possible decline in concentration when work is not carried out in a traditional office setting (Brunia et al., 2016).

While remote working changes the way people work and the associated risks, the location also changes. Therefore, companies need to consider that work no longer always requires physical proximity and take this into account in their organizational strategy (Deloitte, 2019). As we wrote in the previous section, the institutions involved must at the same time take into account the digital divide as an obstacle to the implementation of remote working and advocate a comprehensive international strategy to improve the work climate and quality of life for employees.

How to act concretely?

Today's world is characterized by a great deal of uncertainty, which means it is of utmost importance for every organization to be able to predict its future needs and find solutions to manage them. This is why organizational change must be part of a company's strategy if it has long-term ambitions (Rieley and Clarkson, 2001). However, there are a number of issues that need to be addressed in the implementation of remote work, namely that it must be: thoroughly discussed and planned in advance with all the stakeholders; adapted to the specific characteristics of the work, the remote workers and the organization; be the subject of essential collective negotiation, charter as a "strict minimum". In the literature, in view of the potential drifts observed following the implementation of remote work, researchers have studied what had been done by organizations to supervise and support the changes. It has been found that when management is involved in the change and/or the corporate culture is supportive of remote work, its implementation is better perceived and more readily adopted by employees (Brunia et al. 2016; Bick et al. 2020). Thus, or-

ganizations that invest in and mobilize appropriate and effective digital tools for remote workers and provide support on how to use them foster more ready acceptance of the changes and a more productive outcome (IBGE, 2006; Quoistiaux, 2020). Instead of managing by control and presence, organizations have to manage by productivity (Taskin, 2006), while ensuring that employees are not negatively impacted by the social distance this may create between them and their peers (Taskin, 2006).

Bloom et al. (2015) also propose a hybrid work-from-home system, where employees split their time between home and office. This flexibility in work management leads to a notable increase in worker performance, both because they spend more hours at work (fewer breaks and sick days) and because a working environment that is quieter and more convenient makes them more productive. Workers report greater job satisfaction and turnover is reduced drastically. However, their performance-dependent promotion rate decreases. Bloom et al. (2022) point out that this way of working has become dominant among US graduates. Companies that adopted this method during the pandemic report reduced turnover and increased job satisfaction, which are both indicators that employees value this flexible way of working. Researchers have also noted a reduction in working hours on days at home in favor of increasing working hours in the office and on weekends. Indeed, working from home alters the structure of the working week. Furthermore, remote working was also found to impact work patterns both positively and negatively. Not surprisingly, there is an increase in individual messaging and group video calls, though this has spilled over also into the office. Finally, there is a small positive impact on productivity, mainly due to employee retention and job satisfaction.

Brynjolfsson (2022) confirms that during the pandemic in the United States, 31.6% of employees worked continuously from home, and 22.8% worked in a hybrid mode, for a total of 53.6% remote workers. About half of the US workforce currently works remotely at least once a week. Gallacher and Hossain (2020) note that 41% of jobs in Canada can be done remotely, albeit with significant variations across provinces, cities and industries. Finally, Montenovio et al. (2022) show that the reduced job losses during the pandemic, as compared to the 2001 recession and the Great Recession, can also be explained by the possibility for many jobs to be carried out remotely. More women lost their jobs than men during the crisis, though remote work has protected them from further rises in unemployment. Indeed, women are often found in roles more compatible with remote work than their male colleagues.

Evolution since COVID-19

In France on March 18 2020, an emergency ministerial order mandated remote working for nonessential businesses where social distancing could not be ensured, in order to curb the spread of COVID-19 (Wolters et al., 2020). One of the main objectives of remote work was to eliminate physical contact between coworkers (Quoistiaux, 2020), which is why the crisis contributed greatly to the diffusion of remote work,

facilitating its implementation and improving research on the topic. Studies on remote work suggest that the crisis has improved cooperation between different actors in society and the value of new and more flexible work practices (Peters et al., 2014).

1.2 Coworking and coworking spaces

The emergence of coworking spaces

Contemporary coworking began in 2005 in San Francisco. It allows freelancers to work in a shared place and to not be isolated. Since 2005, coworking spaces have spread significantly across the globe and recorded an impressive annual growth rate, particularly since 2007-08 (Gandini, 2015). From a theoretical point of view, this concept is an example of sharing economy (Bouncken et al., 2016; Bouncken, 2018; Blagoev et al., 2019). Coworking spaces are the locations in which coworking happens (Waters-Lynch and Duff, 2021), but more specifically, coworking spaces are shared workplaces used by a variety of professionals (mostly freelancers but not only) working in various areas of specialization in the vast domain of the knowledge industry (Gandini, 2015). The term 'coworking space' encompasses a wide range of solutions (Parrino, 2015), which is why there is no strict definition (Merkel, 2015, 2019). For example, Spinuzzi (2012, p. 432) defines coworking as a "... superclass that encompasses the good-neighbors and good-partners configurations as well as other possible configurations that similarly attempt to network activities within a given space." There are also different definitions based on the different perceptions of the providers and users. On the one hand, users tend to perceive coworking spaces according to a single model, while the providers perceive them according to multiple models.

In response to the need to distinguish coworking spaces through what they include, Parrino (2015) first proposed the study of coworking spaces as the colocalization of several persons in the same environment but also considering the heterogeneity among them. Later research focused on the importance of collaborative and supportive relationships in these spaces (Moriset, 2014, Servaty et al., 2016; Merkel, 2019); of this literature, only Moriset (2014) considers coworking spaces more as an atmosphere than a place.

Coworking: a philosophy

There is a difference between coworking spaces created by people who need a place to work and coworking spaces organized and/or implemented by companies. In the first case, according to an article on Network World, coworking was conceived as a movement or a philosophy characterized by four common values: collaboration, openness, community and sustainability (Reed, 2007). In this scenario, social relations are more important in worker-led coworking spaces as compared to business-led coworking spaces. Later studies showed that accessibility is also a key factor, leading to a global movement of 5 core values: community, openness,

collaboration, accessibility and sustainability (Gerdenitsch et al., 2016; Servaty et al., 2016). Only Moriset (2014) preferred to use the word diversity over accessibility. In a more recent study, Resch et al. (2021) suggested that this trend is underpinned by emotionally-driven fantasies of community-led cocreation. Whilst coworking spaces are made by people who work in them, they are also created by people who manage them, who are termed 'hosts'. Spinuzzi (2012) finds that hosts can also play an important hybrid role of both space manager and coworker.

Expected outcomes

Thanks to a study on coworkers carried out in Milan, we learned that the expected outcomes from the use of coworking spaces are a sense of community (48%), overcoming isolation and experiencing work in a physical space (55%) and entertaining networking activity (34%). Also, these coworkers declared that this solution achieved the instrumental objective of building a network of contacts and acquiring a reputation in the professional scene. A large majority of workers declared having expanded their network of clients (61%) and associates (62%) by accessing a coworking space in a mutual process of interdependence among workers. Also, an overall 52% of coworkers reported that their earnings have increased since participating in coworking spaces (Colleoni and Arvidsson, 2014). From another perspective, coworking spaces allow remote workers to combine work, leisure and travel (Orel, 2019).

Conditions/Constraints

Whilst coworking spaces are open, free and accessible, this kind of shared place of work and collaboration is not suited to everyone (Rese et al., 2020). Spreitzer's research focused on the job satisfaction of freelancers in coworking spaces (Spreitzer et al., 2015a), according to which coworkers use coworking spaces because they see their work as meaningful, to have more job control, and to feel part of a community. In this case, it is important for them to feel that the coworking spaces they are part of meet these criteria. Finally, studying the creation of coworking spaces, Garrett et al. (2017) identified three important types of collective actions (endorsing, encountering, and engaging) that contributed to the sense of community within the coworking space studied in his research. This sense of community improves the coworkers satisfaction and, therefore, makes the spaces more attractive.

5 core values of coworking spaces

In theory, coworking spaces differ in terms of the type of building or the furnishings. However, all coworking spaces share the following five core values: Collaboration, Community, Sustainability, Openness and Accessibility. Collaboration means the desire to work with other coworkers and create a sense of community which is based on the principle of reciprocity, where individual coworkers share their knowledge and support each other. Sustainability refers to

sustainability and environmental awareness. Coworking spaces are sustainable in terms of the sharing of facilities – for example just one printer used by everyone – and green in terms of reduced travel, which means reduced emissions. The fourth fundamental value is openness; coworkers must be open-minded and willing to communicate. It is also about the mutual exchange of knowledge and ideas. The last basic value is that a coworking space should be financially affordable for every coworker and easy to reach (Mittag, 2023).

The key elements of a coworking space

Every coworking space is unique because they have different owners, and each owner furnishes their coworking space differently. However, there are some standards that all coworking spaces typically adhere to. These standards include Flexdesks, Fixdesks, and Private Offices. Flexdesks are desks that anyone can use, Fixdesks are designated workstations for specific coworkers, and Private Offices are separate spaces, typically accommodating multiple people. All workstations are designed with ergonomics in mind. Additionally, every coworking space is equipped with a small kitchen with a fridge and microwave. In addition to individual workstations, there are conference rooms available for team discussions or meetings with clients (Mittag, 2023).

In terms of technology, the basic equipment usually includes fast broadband Internet, reliable Wi-Fi connection and a printer (Mittag, 2023). According to CoWorkLand, fast broadband is understood to mean at least 400 Mbit/s (CoWorkLand eG, 2022). Coworking spaces also need an efficient booking system, which, according to CoworkLand, is for example the software from Cobot (Bundesministerium für Ernährung und Landwirtschaft (BMEL), Referat 817 - Grundversorgung und Mobilität in ländlichen Räumen and CoWorkLand eG, 2022). Given that coworkers also have to make phone calls to customers or colleagues, they also need a high-quality headset with excellent audio (Ebert, 2020). Open-space offices can make telephone communication difficult, in that one coworker talking loudly on the phone can make it difficult for others to concentrate. The solutions to this problem, as suggested by CoworkLand, include padded partitions or separate phone booths (Bundesministerium für Ernährung und Landwirtschaft (BMEL), Referat 817 - Grundversorgung und Mobilität in ländlichen Räumen and CoWorkLand eG, 2022).

Infrastructure for Coworking Spaces

A coworking space needs a good digital infrastructure – i.e., a stable fiber optic line – and good public infrastructure. According to CoworkLand, in rural areas, public transportation can often be limited in range, so the coworking space should ideally be located near an existing train station or bus stop so that it is possible to get there without a car. In addition, it is also useful to find somewhere that has in the vicinity cafés, grocery stores or restaurants (Bundesministerium für Ernährung und Landwirtschaft (BMEL), Referat 817 - Grundversorgung und Mobilität in ländlichen Räumen and CoWorkLand eG, 2022).

Who are Coworkers?

The '1st Global Coworking Survey,' conducted by Deskmag in collaboration with TU Berlin in 2010, explores the characteristics of coworkers. The survey involved 661 participants from 24 different countries. The majority of coworkers are self-employed, followed by those employed by companies. The majority of coworkers work in the service sector, particularly the creative industry and New Media, with significant numbers in graphic and web design, IT, consulting, and marketing. Over half of the participants hold a university degree, and the majority fall within the age range 25-39 years. The study also highlights the fact that a significant proportion of users had previously worked from home before moving to coworking spaces, followed by people with a history of traditional office-based employment (Mittag, 2023).

Potential of coworking spaces

There are four criteria that represent coworking: knowledge transfer and innovation potential, network and community, flexibility, and infrastructure and costs. Knowledge transfer and innovation potential mean that coworking spaces support social and occupational interaction, such as events or collaborative work within the same room. Additionally, the design of coworking spaces fosters the development of new ideas and concepts. Network and community refer to the fact that, while every coworker conducts their work independently, unlike in a home office, they are not alone and instead share the workspace with many other people. Flexibility means that coworkers can access the space at any time and choose the workstation that best suits their needs or tasks. The last criterion is infrastructure and costs. Coworking spaces typically offer a high-quality and up-to-date infrastructure as a standard feature. Furthermore, these spaces are often conveniently located for users, reducing travel expenses, in addition to the costs saved by not having to buy office equipment (Mittag, 2023).

Perceived benefits

Coworking spaces offer workers without permanent employment a way of reterritorializing the physical organizational structure previously offered by companies (Gandini, 2015) and an alternative between the home office and traditional company offices (Capdevila, 2014); it's like a third place (Waters-Lynch et al., 2016; Wilhoit Larson, 2020). Generally, coworkers aren't competitive, they are seeking to bring 'the social' aspect back into their working life (Clark, 2007). From competitive relationships at work to workplace collaboration: coworking can be seen as a key resource. Coworking spaces also appear useful to enabling the circulation of information that leads to valuable outcomes (Colleoni and Arvidsson, 2014). Capdevila (2013) also defines coworking spaces as microclusters that enable knowledge transfer among members of a network of users, who, according to Papagiannidis and Marikyan (2020), work in different sectors. Finally, cowork-

ing spaces offer flexibility and scalable agreements for both companies and coworkers (Bouncken and Reuschl, 2018; Gauger et al., 2021). From a company perspective, it can help employees discover new ideas, reduce real estate costs, improve employee job satisfaction (Spreitzer, 2015b) and be used as a way of distributing work (Spinuzzi, 2012). Finally, it is an affordable office solution for entrepreneurs and startups with limited funds (Richter et al., 2017).

Evolution

The literature on coworking is growing fast, with some viewing coworking as a source of new opportunities and others considering coworking as a phenomenon used by marketing (Moriset, 2014). For example, some people believe that we should be cautious in this area because the expansion of coworking spaces is a never-ending process of networking and the recursive search for jobs for coworkers and the competition among them is not completely suppressed by this kind of "opportunity". From a practical point of view, the number of coworkers and coworking spaces is growing (Rus and Orel, 2015; Jakonen et al., 2017). Despite COVID-19 restrictions, the number of coworking spaces has grown from 16,000 to 23,500 in just 3 years, while the number of coworkers grew from 1.6 to 2.5 million, and these numbers are expected to continue to grow to 42,000 by 2024 (Kraus et al., 2022).

Freelancers and entrepreneurs are no longer the only ones using coworking spaces, which are being democratized for use by the companies themselves (Bouncken et al., 2020).

Connected studies

The literature on coworking spaces also benefits from other studies on entrepreneurship, remote workers, etc. For example, Vandor and Franke (2016) studied the impact of the cross-cultural experience of entrepreneurs on their ability to recognize opportunities by using a sample of entrepreneurs in two coworking spaces. More recently, Kollmann et al. (2019) used a sample of German coworkers to study the work habits of entrepreneurs. Although coworking is not in itself the subject of long-standing research, there are a variety of related areas of research that can contribute additional knowledge to this field.

1.3 Rural coworking spaces

From urban to rural environments

In recent years, investments in fiber optics and 4G have improved internet accessibility. While this improved network has made it easier for people to connect with each other, it has also allowed internet-dependent workers and businesses to move out of the city. Indeed, some companies have taken advantage of this new freedom to relocate part of their activity. All this already contributed to the development of coworking spaces up to 2019 (Capdevilla, 2021), when, with

the outbreak of COVID-19 this process was further accelerated (Akhavan et al., 2021).

Based on his observation, Capdevilla (2021) worked on the case of coworking spaces in Barcelona that moved out of the city to more rural areas, with one chapter devoted to the role of such spaces in rural contexts. According to him, the different aspects constituting the understanding of coworking (materiality, practices, and values) have been transposed through a process of translation as defined by Latour (1986). Thus the characteristics attributed to coworking spaces in urban environments have been preserved in rural environments. In any case, coworking can be considered at different levels: coworking as the sharing of physical space and work tools (materiality) (Cnossen and Bencherki, 2019); coworking as a work practice based on peer collaboration (practices) (Garrett et al., 2017; Jakonen et al., 2017); and coworking as a concept tied to values and principles related to the gift economy and the sharing economy (values). His observations also showed that there were different stages for coworking translation from urban to rural areas. The first stage was material. It simply consisted of moving from one physical location to another. According to Capdevilla (2021), this was followed by a sense-making stage, in which individuals appropriated the concept. This step was facilitated by the links that existed between the new people involved and those who had already been coworkers. Once the material translation was done, it was necessary to transfer the practices. Some differences then became apparent. In urban areas, the density of the population allowed coworking spaces to be specialized, whereas rural coworking spaces show a great diversity of skills (Meili and Shearmur, 2019). Also, whereas in urban areas coworking spaces experience a lot of back and forth from coworkers, in rural coworking spaces coworking communities are more stable and generate more personal relationships between individuals. In the case studied by Capdevilla (2021), this led the managers to adopt a different management style with more frequent interactions. The final stage of this translation was for the spaces in rural areas to be truly accepted as coworking spaces, which expanded and altered the understanding of coworking spaces in the broadest sense. It also helped to disseminate coworking values by considering the rural context as an opportunity for reinterpretation. Since then, coworking has no longer been just an urban phenomenon but a global one.

Akhavan et al. (2021) focused on the spread of rural coworking spaces as tools for regeneration purposes, place marketing and attracting economically active individuals and their families both after and thanks to the COVID-19 crisis. During COVID-19, many workers were in lockdown and all public places were closed. Thanks to this crisis, the countryside grew in attractiveness in terms of quality of life (Tomaz et al., 2022). Rodriguez-Pose and Storper (2021) emphasized the impact that this crisis had on people and their work behaviors. People began to question where they really wanted to live, the impact of their lives and choices on global warming, etc., which was compounded by the extensive use of remote working (Sostero et al., 2020). And once people experienced

remote working, they realized they could, and wanted to, work from everywhere (Akhavan et al., 2021).

Others before Akhavan et al. (2021) had already shown that coworking spaces can be considered drivers for social cohesion and economic development (Boutillier et al., 2020). Thanks to research by Akhavan et al. (2021), we learned that rural coworking spaces are spreading above all Italy, but more generally Europe. Most of these places are private, with few (municipal) public options. Rural coworking space hosts explain they want to attract talent to work into their remote offices, and use both shared offices and already existing company premises to create their coworking spaces. Finally, their research showed that rural coworking spaces are good for the environment (by reducing car travel), workers (by improving work-life balance) and the local area (by attracting people with skills and knowledge and enhancing local socio-economic development).

Definition of attractive features

In a recent study by, Hölzel and de Vries (2021) reviewing German literature, they observed that in cities, people are using coworking space to avoid social isolation, to separate their private and work life or to reduce their commute (Tavares, 2016; Kratzer, et al., 2019; Denzinger et al., 2000). They questioned where and why people use rural coworking spaces instead of or in addition to working in urban areas (Hölzel and de Vries, 2021)? Through a structured survey among coworkers, they showed that people who chose to work in rural coworking spaces generally make this choice based on perceived benefits and opportunities. Interestingly, they also discovered that 25% of survey respondents use more than one coworking space and 7% use more than 3 coworking spaces. These include international workers who work in different countries throughout the year. Most often, these coworkers use one urban coworking space in their company's country and other coworking spaces in rural areas. Also, 28% of coworkers use coworking spaces everyday whereas 28% use these spaces only three times a week and 31% only one or twice a week. They studied the time users spend in the coworking spaces: 10% of them spend less than 4 hours a day in a coworking space while 11% spend between 4 and 6 hours there and 82% are there for 10 hours a day or more. In terms of facilities, 93% of coworking space users use the shared kitchen, 80% use the printer, 70% use small conferences rooms and 35% use large ones. Many coworkers also need quiet spaces, or private desks, to hold important meetings. This survey also provides us with information on the means of transport that coworkers use to travel to their first, second or third coworking space and shows that users of coworking spaces help the local economy by spending in the local area; they like to visit bakeries and restaurants. A proportion of them are even willing to spend more than they would in the city (up to €30 per day). They also point out that remote villages and towns also seems to benefit from coworking spaces. Indeed, this survey by Hölzel and de Vries (2021) shows that coworking spaces make villages and towns more attractive to potential new residents.

In an even more recent study, Merrell et al. (2022) reported several drivers of well-being that justify joining and remaining in coworking spaces. The people they interviewed use rural coworking spaces because they offer autonomy, tools, social relations and contact with nature. Rural coworking spaces give them autonomy for three reasons: convenience (reduced travel), flexibility (e.g. managing childcare or working two jobs) and work-life balance (more and better quality free time). It also provides them with skills in overcoming distractions, professionalism, networking and knowledge exchange. Relatedness is the psychological need to belong, i.e. feeling connected to and cared for by others (Deci and Ryan, 2000). The coworkers interviewed for this study explained that rural coworking spaces gave them a sense of belonging to a professional community. Merrell et al. (2022) also found unexpectedly that rural coworkers value working (and living) in a non-urban area, surrounded by nature. In their interviews, they often refer to the landscape and the view that is a source of wellbeing in the workplace.

These results provide an indication of the ideal facilities sought by coworkers, which are an important factor in their choice of coworking spaces. If they need to travel from one coworking space to another, they may prefer a rural coworking space served by good public transport. The demand for quiet rooms and large conference rooms also demonstrates the need to ensure a variety of different spaces within the coworking space. The ideal coworking space should not only provide shared office space, but also private rooms and quiet areas. It should also have a kitchen and be in a peaceful place with a great view the countryside.

In any case, to understand the reasons why people choose one coworking space over another, and therefore a rural coworking space, we must look more closely at their motivations, which can be explained by self-determining theory (Merrell et al., 2022).

The characteristics of rural coworkers

The study by Hölzel and de Vries (2021) focused on what would make a rural coworking space attractive for its users but also on the characteristics of rural coworker. They found that rural coworkers are more often employees than in other coworking spaces; this leads to the hypothesis that maybe rural coworkers are using these spaces to avoid the commute to their company. Whilst they use these places to avoid travelling to work, Hölzel and de Vries (2021) found that the majority use a car to get to the coworking space, instead of cycling or walking. Their interpretation is that coworkers in

rural areas can live too far away to travel by bike or on foot, depending on the area covered by the coworking space which can be larger in rural areas than in cities, where they are found in greater numbers. Finally, in rural coworking spaces, there is a greater variety of backgrounds, ages, and types of workers than in urban areas. This could also be explained by the fact that, in remote areas, coworking spaces are more used because they are easier to get to than travelling to a company, and not to connect with peers with a similar background. As numbers also show, for some users of rural coworking spaces, these places allow them to save time, which can be dedicated to rest and social/leisure activities.

Contribution to rural development analysis

Some studies have investigated the contribution of rural coworking spaces to local development, by attracting new residents and offering them services and local products that they would like to buy and consume (Akhavan et al., 2021; Hölzel and de Vries, 2021). It has been shown that policy makers agree that these places can be tools to stimulate entrepreneurship and the creative economy outside traditional economic sectors (Roberts and Townsend, 2016). They also help retain workers who might be tempted to move to work in the city because of the infrastructure it offers (Fuzzi, 2015).

Finally, the COVID-19 crisis and the consequent increased use of internet for remote working have highlighted rural coworking spaces as a driver for connection and revitalization, which explains, which explains why some municipal authorities have agreed to offer financial support (Tomaz et al., 2022).

Whilst the research agrees that coworking spaces contribute to rural development, none of the studies has examined the real impact of these places on local development.

The risks of digital divide

Despite the fact that the literature is optimistic about the diffusion of remote workers and their contribution to local development (Moriset et al., 2012; Salemink et al., 2017), the risk of digital divide remains for remote areas in Europe (Tomaz et al., 2022). With few job opportunities, distance from basic services, dependence on private cars, inadequate telecommunications, and a scarcity of social and business contacts, remote areas are often penalized, and disadvantaged, compared to cities when it comes to attractiveness. The COVID-19 crisis certainly accelerated the diffusion of digital tools for remote working and e-services and also improved the attractiveness of rural areas, according to an OECD report (OECD, 2020). However, even today, only a few small villages and isolated settlements have ADSL technology.

2. Comparative quantitative research in France, Italy and Austria

For the quantitative part of the research, starting from the analysis of the literature and on the basis of the indications that emerged from the qualitative interviews (see chapters 3 and 4 of this document), a questionnaire was created and subsequently uploaded to Google Forms and administered online to specific target groups, such as local authorities, entrepreneurs, local workers (public and private) and students. The questionnaire was prepared in English and subsequently translated into Italian, French and German, and administered in the three partner countries of the project, in order to obtain a broad and varied perspective on experiences, opinions and expectations regarding remote work and coworking spaces.

The questionnaire is structured in 16 sections and is divid-

ed into two main themes: “Remote Work” and “Coworking Spaces”. The items touched on various aspects of remote working and coworking spaces, investigating specific elements of the theme under study. The items are largely followed by a 5-point Likert or type-Likert scales, ranging from “completely disagree” to “completely agree”, adopted to measure respondents’ responses to the different variables and dimensions examined. In addition, some questions require multiple or open-ended answers, allowing greater flexibility in the responses.

The items were created to collect information in a targeted and appropriate way for each respondent, based on their previous experience of remote working and coworking spaces. Table 1 presents the items obtained from the analysis of the literature with the relative references, while others have been built ad hoc based on the transcripts of the interviews with remote workers who moved to live in the Ayas Valley, conducted in the qualitative phase of the research.

TABLE 1.

Generic themes to be examined	Insights from: - Literature review LR (cite references) or - Exploratory study	Precise formulation of the question in the questionnaire
REMOTE WORKING		
Feasibility	Mascagna 2019	Working remotely makes my job more difficult
		Considering my job, it is feasible for me to work remotely for a certain number of hours a week
		Working remotely is more difficult at certain time of the year
Costs	Mascagna 2019	Remote working has a positive medium-long term effect on the costs for my company/employer
		Remote working has a negative medium-long term effect on the costs for my company/employer
		Remote working reduces my travel costs
Motivation	Mascagna 2019	Remote working improves my quality of life
Performance	Mascagna 2019	Remote working helps me to achieve my business targets more efficiently
		Remote working helps me to take time off work
		Remote working helps my career progression within the company
		Remote working could help me to improve my performance within the company
		Remote working could help everyone to improve their performance within the company
		Remote working could help to increase company profits
		I would work/study more if I were working remotely

Challenging aspects of remote working	Donati et al., 2021	Maintaining appropriate levels of communication with my team/colleagues
		Managing technology/communication tools
		Managing my time/avoiding distractions
		Balancing personal/family responsibilities and workload
		Managing productivity
		Receiving clear communication from supervisors/managers
Social time	Taskin, 2003	If I worked remotely, I would have more free time
		Remote working diminishes my sense of belonging within the company
COWORKING SPACES		
Performance expectancy	Kopplin et al., 2022	A coworking space would be useful for my daily work
		Using a coworking space would increase my chances of achieving things that are important to me
		A coworking space would help me achieve things faster
		Using a coworking space would increase my productivity
Behavioural Intention	Kopplin et al., 2022	I would use a coworking space if there was one available
		I will try to use a coworking space in my daily life
		I plan to use a coworking space regularly
		I intend to recommend using a coworking space
Perceived relevance	Kopplin et al., 2022	A coworking space would fit my interests
Effort expectancy	Kopplin et al., 2022	A coworking space would meet my preferences
		Learning how to work in a coworking space is easy for me
		I find a coworking spaces easy to use
Hedonic motivation	Kopplin et al., 2022	It is easy for me to become skilled at using coworking spaces
		I enjoy using coworking spaces
		Using a coworking space is fun

Initially, *previous experience in remote working* was investigated with all respondents presented with 6 items, followed by the question: “Have you ever worked remotely?” If the respondent answered “Yes”, they were redirected to 12 questions on their past experience of working remotely, as well as their evaluation and objectives reached. For respondents who answered “No”, questions on working remotely were omitted and they were directed to another section of the questionnaire with 9 items more relevant to them. The structure of the questionnaire was similar way for coworking spaces. First, asking if the respondent has ever used coworking spaces. If the respondents answered “Yes”, they were redirected to 9 specific questions on experience and preferences regarding coworking spaces. Conversely, if the respondents answered “No”, questions on this were omitted

and they were redirected to a section on how they perceive working in these spaces and the possible benefits, with 10 questions. In addition, 16 questions on the desired characteristics and services of coworking spaces, plus questions on the type of lease and open questions on suggestions were addressed to all respondents.

This targeted approach gathered detailed and relevant data based on the actual experience of each respondent, avoiding unnecessary questions and saving time for both respondents and researchers.

In detail, the topics investigated in the questionnaire are as follows:

- 1. Remote Working:** this focuses on the feasibility of remote work and on the cost and motivations of the respondents. Feasibility is assessed through three ques-

- tions, investigating whether working outside their usual place of work involves complications, whether the interviewees can work remotely for a certain number of hours per week and whether working remotely is more difficult at certain times of the year. The answers to these questions provide information on adaptability to remote work and the possible challenges involved.
2. **Costs:** as regards costs, three statements are examined concerning the effects of working remotely on the long-term costs of the company or employer and the reduction of travel costs for respondents. This helps to understand if remote work can lead to cost savings for companies and workers.
 3. **Motivation** is explored by asking whether remote work improves respondents' quality of life. This measure provides valuable information on the perceived personal benefits of working remotely.
 4. **Challenging Aspects of Working Remotely:** this section of the questionnaire explores the specific challenges encountered by respondents while working remotely. This includes communication with the team or colleagues, the management of technology and communication tools, time management and prevention of distractions, balancing personal responsibilities and workload, managing productivity and clear communication with supervisors or managers. This information helps to identify the main challenges to working remotely and to understand how they can be faced and overcome.
 5. **Social Time and Relations with Management:** this section assesses how working remotely affects respondents' social lives and on the relationship with business management. The questions explore the possibility of having more free time by working remotely and respondents' perception of being monitored or less trusted by the company if they work remotely. This information helps to understand how working remotely can affect social dynamics and the relationship between employees and the company.
 6. **Coworking Spaces:** this examines performance expectations regarding the use of coworking spaces. The questions rate respondents' perception of the usefulness of coworking spaces for their daily activities, the possibility of achieving personal goals, the speed in achieving these objectives and increased productivity. This helps to understand how much respondents value coworking spaces in terms of improving work performance.
 7. **Services Offered in Coworking Spaces and Location:** in this section, respondents are asked about the services offered within the coworking spaces, through a list of 16 services to be evaluated according to perceived importance (5-point type-Likert scale from "not important at all" to "extremely important"). This information helps us to understand which services are most important to

respondents and can influence the choice of a coworking space. In addition, four questions also evaluate the additional factors of the location and environment of coworking spaces .

8. **Other socio-demographic information:** the final part of the questionnaire collects socio-demographic information from the respondents, such as gender, age, marital status, household size, education, type of employment, type of contract and other information related to the respondents' job and personal backgrounds. This information allows us to contextualize the responses and understand the differences between demographic groups.

In all three language versions, administered in the three respective countries, the questionnaire maintained a consistent structure, only slightly adjusted to the culture and socio-demographic s of each country. The main differences are:

Address: in Italy, the postcode was requested, while in Austria respondents had to enter only the name of their municipality and in France, both pieces of information were requested.

Socio-cultural differences: other small differences are found in the answer options, especially in the socio-occupational categories and in the educational levels of the respondents. One example is the variation in the definition of "years of primary education" between Italy, France and Austria. Another is the different classification of the various professional profiles (for example, an *educatore* in Italy is considered a *profession intellectuelle supérieure* in France) or the difference in value of academic qualifications between Italy and Austria (in Austria, a middle-school diploma is not a valid qualification). In situations like these, the responses were tailored to fit the specific context of each country, adapting existing options or adding new ones.

2.1 Sample description

In the three countries, the numbers of respondents were as follows: Italy 394, France 321, Austria 49, 14 from other countries, 18 nationality not reported. The Austrian partner encountered difficulties in data collection, particularly due to objections raised concerning data protection and privacy, and the online administration of the questionnaire ; even with the intervention and assistance of the project manager, we failed to recruit more respondents.

The total sample therefore includes 796 respondents (but the two subgroups - 14 other nationality and 18 not reported - were excluded from the main comparative analyses).

Table 2 shows the distribution by gender in the three countries and the answers to the two questions screening for previous experience of remote working and coworking spaces, along with the ChiSquare comparisons.

TABLE 2.

	Italy		France		Austria		Total		ChiSQ
	N	%	N	%	N	%	N	%	sig
GENDER									ns
Male	153	39.0%	140	43.9%	26	53.1%	326	42.0%	
Female	225	57.2%	178	55.2%	22	44.9%	432	55.6%	
Non binary/Prefer not to say	15	3.8%	3	0.9%	1	2.0%	19	2.5%	
AGE									p < .001
18-24	12	3.1%	52	16.3%	18	36.7%	85	11.0%	
25-40	119	30.3%	124	38.8%	25	51.0%	276	35.6%	
41-60	251	63.9%	125	39.1%	6	12.2%	385	49.6%	
> 60	11	2.8%	19	5.9%	0	0.0%	30	3.9%	
EXPERIENCE OF REMOTE WORKING									p < .05
YES	336	85.4%	290	90.5%	38	77.6%	676	86.9%	
NO	58	14.6%	31	9.5%	11	22.4%	102	13.1%	
EXPERIENCE OF COWORKING SPACES									p < .001
YES	27	7.1%	64	20.8%	6	12.2%	101	13.0%	
NO	366	92.9%	257	79.2%	43	87.8%	676	87.0%	

Note. The total is greater than the sum of the three countries because “Other” or nationality not reported are included.

Distribution by gender does not significantly differ among the three countries, with a slight prevalence of women.

As regard age, nearly half of respondents are 41-60 years old, followed by 25-40. One significant difference emerged at the ChiSquare comparison, with a higher number of people in the 41-60 age bracket in Italy, and younger respondents in France.

The experience of remote working and coworking space s showed contrasting trends: while almost 87% of the total sample had previous remote working experience, only 13% had previous experience with coworking spaces. In both cases, there are significant differences among the countries: experience of remote working was more frequent in France

compared to Italy and Austria, as was the experience of coworking spaces, though not extensive, with the lowest proportions found in Italy.

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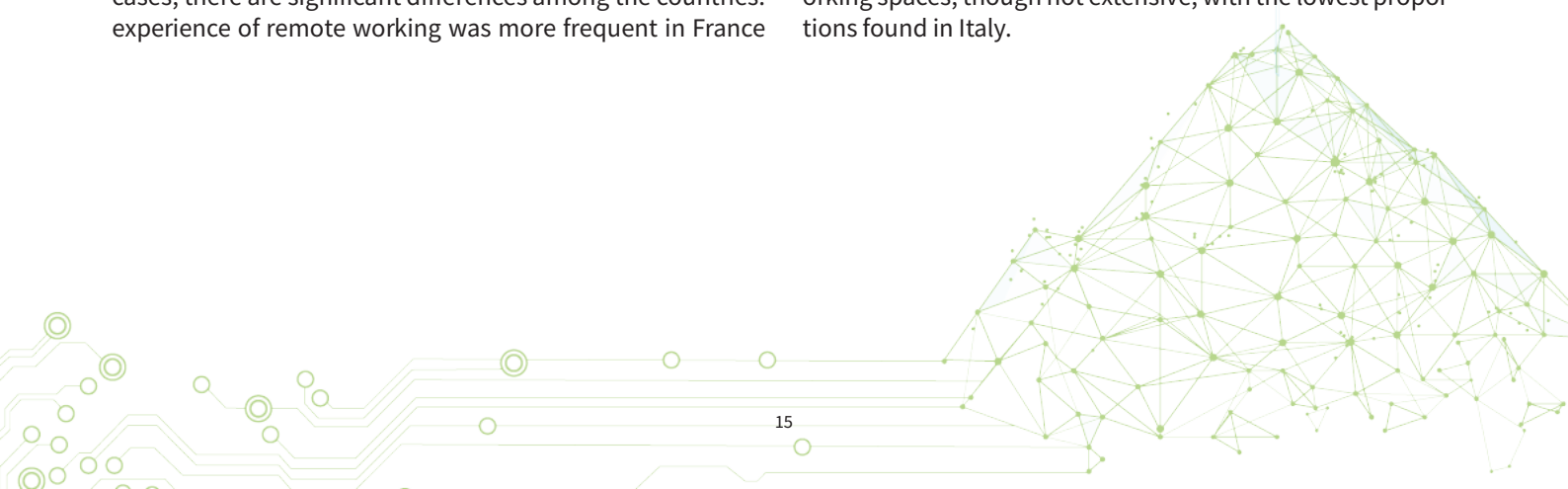


TABLE 3.

	Italy		France		Austria				ChiSQ
	N	%	N	%	N	%	sig	%	sig
TYPE OF OCCUPATION									p < .001
public sector	200	50.6%	79	25.1%	1	2.0%	283	39.0%	
private sector	163	41.5%	123	38.6%	31	63.3%	293	40.2%	
Self-employed entrepreneur	25	6.3%	74	22.5%	2	4.1%	100	13.7%	
student	6	1.5%	45	13.8%	15	30.6%	52	7.1%	
TYPE OF ENTERPRISE									p < .001
Micro	10	6.1%	22	17.8%	1	3.2%	34	10.5%	
Medium	42	25.8%	56	45.7%	11	35.5%	111	34.4%	
Large	111	68.1%	42	34.1%	19	61.3%	175	54.2%	
Individual	0	0.0%	3	2.3%	0	0.0%	3	0.9%	

As regard the type of occupation and enterprise, the three countries differ significantly. Private sector employees are the relative majority, particularly in Austria followed by public sector employees, particularly in Italy. Employees of large enterprises constitute the majority of respondents, particularly in Italy and Austria, whereas in France medium-sized enterprises are more represented.

2.2 Dimensions of evaluation

To analyze the dimensions underlying the assessment of remote working and coworking spaces, and to reduce the number of considered dimensions, several principal component analyses were conducted on the items. The filter structure of the questionnaire resulted in different numbers of respondents in different sections, so separate analyses were appropriate. The 6 blocks of items can be summarized as follows:

- 6 items on remote working addressed to all respondents (N = 796)
- 12 items to people with previous experience of remote working (N = 692)
- 9 items to people with NO previous experience of remote working (N = 103)
- 21 items on coworking spaces to all respondents (N = 796)
- 9 items to people with previous experience of coworking spaces (N = 104)
- 10 items to people with NO previous experience of coworking spaces (N = 680)

2.3 Remote work assessment

Performance and Communication

A first component analysis was conducted on the 6 items concerning evaluations and attitudes toward working remotely which were addressed to all the respondents (N = 796). The analysis resulted in 2 significant factors (with eigenvalues equal to or greater than 1 and explained variance 68%). The first factor includes three items (Managing my time/avoiding distractions, Managing productivity, Balancing personal/family responsibilities and workload; Cronbach alpha .83), referring to the dimension of *Performance*, well represented in the literature (e.g. Mascagna, 2019). The second factors also include three items (Maintaining appropriate levels of communication with my team/colleagues, Receiving clear communication from supervisors/managers, Managing technology/ communication tools; Cronbach alpha .69), referring to the dimension of *Communication*, a subdimension of what in the literature have been indicated as the *Challenging aspects of working remotely* (Donati et al., 2021). Two global scores were calculated by the mean of the three items.

A similar procedure was followed for the items of the subsections addressed to subgroups of the respondents, and the additional dimensions identified below. However, we present here only the analysis conducted on items related to coworking spaces, which are the main objective of our project. Comparisons of the mean values for the three countries and for all respondents are presented in Table 4.

2.4 Coworking spaces

Previous experience of coworking spaces

(9 items, N = 104)

Easiness and Location

A principal component analysis was conducted on the 9 items concerning evaluations and attitudes toward working remotely, which were addressed to the small number of respondents with previous coworking experience (N = 104; 13% of the total sample). The analysis resulted in 2 significant factors (with eigenvalues equal to or greater than 1 and explained variance 60%). The first factor includes five items (I find coworking spaces easy to use, Learning how to work in a coworking space is easy for me, It is easy for me to become skilled at using coworking spaces, I enjoy using coworking spaces, Using coworking spaces is fun; alpha .83) and it combines the two factors reported in the literature concerning Effort Expectancy and Hedonic Motivation (see Kopplin et al., 2022); it has been defined here as *Easiness*. The second factor includes 4 items referring to the Location of the coworking space (I can easily get to my coworking space location, The coworking space where I work is in a good location, I choose my coworking space for its environment, I choose my coworking space for the services it offers; alpha .73).

NO previous experience of coworking spaces

(10 items, N = 680)

Intention to Use and Performance Expectancy

A last principal component analysis was conducted on the 10 items concerning evaluations and attitudes toward working remotely which were addressed to the respondents with NO previous experience of coworking spaces (N = 680). The analysis resulted in 2 significant factors (with eigenvalues equal to or greater than 1 and explained variance 81%). The first factor includes 6 items which were selected from previous studies (Kopplin et al., 2019), combining the two dimensions of Behavioral Intention and Perceived Relevance. We defined here the factor *Intention to use* a coworking space in the future (I plan to use a coworking space regularly, I intend to recommend using a coworking space, I will try to use a coworking space in my daily life, A coworking space would meet my preferences, A coworking space would fit my interests, I would use a coworking space if there was one available; alpha .95).

The second factor include 4 items (Using a coworking space would increase my productivity, A coworking space would help me achieve things faster, Using a coworking space would increase my chances of achieving things that are important to me, A coworking space would be useful for my daily work; alpha .93) and it corresponds exactly to the scale used by Kopplin et al. (2019) for *Performance Expectancy*.

TABLE 4.

	TOTAL		Italy		France		Austria		sig
	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	
(all participants)	(N = 764)		(N = 394)		(N = 321)		(N = 49)		
Performance (3 items, .83)	2.6	1.1	2.7	1.1	2.5	1.1	3.1	1.0	***
Communication (3 items, .70)	2.8	1.0	3.0	1.0	2.5	1.0	2.5	1.0	***
(coworking space experience)	(N = 97)		(N = 27)		(N = 64)		(N = 6)		
Easiness (5 items, .93)	3.8	0.8	3.7	0.8	3.7	0.8	4.6	0.4	*
Location (4 items, .91)	3.6	0.9	3.5	0.8	3.7	1.0	3.8	0.8	ns
(no coworking space experience)	(N = 659)		(N = 362)		(N = 254)		(N = 43)		
Intention to Use (4 items, .93)	2.1	1.0	2.3	1.1	1.9	0.9	2.0	0.9	***
Performance Exp (4 items, .91)	2.2	1.1	2.3	1.1	2.0	1.0	2.2	1.0	***

NOTE. The respondents' numbers do not correspond to the total subsamples because of missing/other nationality. *** p < .001, ** p < .05, * p < .05 at the Oneway comparisons.

Examining Table 4, we can observe that, for the evaluation of working remotely, the aspects related to Communication are more important than Performance; the three countries differ significantly at $p < .001$: Performance is more important in Austria compared to Italy and France, Communication is less important in Italy compared to the other two countries.

As far as the two dimensions that emerged for people with no previous experience of coworking spaces, the differences among the countries are almost insignificant. Easiness is more relevant than the Location, and this is true of all the respondents, with the exception of France.

Lastly, in people with previous experience of coworking spaces, the two dimensions of Intention to Use and Performance Expectancy assume similar importance, although with significant differences in the three countries, the first dimension more important in Italy, the second in Italy and Austria.

2.5 Desired characteristics of coworking spaces

Table 5 presents the desired characteristics of coworking spaces (answered by all respondents), in descending order of importance on the total value and with the comparisons among countries with Oneway Anova.

TABLE 5.

	TOTAL		Italy		France		sig (t-test)
	MEAN	SD	MEAN	SD	MEAN	SD	
A fast and broadband connection	4.9	0.4	4.9	0.4	4.8	0.5	
Bright and pleasant spaces	4.6	0.6	4.6	0.6	4.6	0.6	
Easily accessibility by public transport	4.3	1.0	4.3	1.0	4.3	1.0	
Easily accessible by car	4.2	1.0	4.4	0.9	4.0	1.1	***
Isolated individual workstations	4.2	1.0	4.1	1.0	4.3	1.0	*
Coffee room microwave	4.1	1.0	4.0	1.0	4.2	1.0	**
A good printer	4.0	1.2	3.9	1.2	4.2	1.1	***
A board room	3.9	1.2	3.7	1.2	4.1	1.2	***
The possibility of interdisciplinary collaborations	3.8	1.1	3.9	1.1	3.8	1.1	
An outdoor space with pleasant views	3.8	1.1	3.8	1.1	3.9	1.0	
Social meetings	3.8	1.1	3.8	1.1	3.8	1.1	
Dining options and shops nearby	3.8	1.1	4.0	1.0	3.6	1.2	***
Digital support	3.8	1.2	4.3	0.9	3.2	1.3	***
A large screen	3.7	1.3	3.8	1.2	3.6	1.3	*
A relaxation room	3.5	1.3	3.4	1.3	3.6	1.2	
A 3D printer	1.8	1.1	1.8	1.1	1.8	1.0	

NOTE. *** $p < .001$, ** $p < .05$, * $p < .05$ at the Oneway comparisons.

The three most important characteristics (and respondents of all the countries agree on these) are: Fast broadband connection, Bright and pleasant spaces, and Easily reached by public transport. There are numerous significant differences among the three countries, partly due to the large sample size. Considering only large differences with $p < .001$, being easy to reach by car is more important in Italy, a good printer and a meeting room in France, places to eat nearby in Austria and in Italy, digital support in Italy, social events in Italy and France, a big screen in Austria.

2.6 Job satisfaction

Three items in the final section of the questionnaire investigated the job and life satisfaction of all respondents, and the mean values in the three countries were compared with Oneway Anova. The results are presented in Table 6: No significant differences emerged in terms of job satisfaction and intention to leave the job in the next 12 months, while the intention to change lifestyle shows significantly larger values in Italy compared to France and Austria.

TABLE 6.

	TOTAL		Italy		France		Austria		sig
	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	
My job satisfaction has decreased the past year	2.6	1.4	2.7	1.4	2.5	1.4	2.6	1.3	ns
I would like to leave my organization within the next 12 months	2.1	1.4	2.2	1.3	2.0	1.4	2.3	1.5	ns
I would like to change my lifestyle in the next 12 months	2.8	1.4	3.0	1.4	2.6	1.5	2.7	1.3	**

2.7 Type of lease

Lastly, but not least, four questions investigated the preferred type of lease for the coworking space and the amount of money the respondents would be willing to spend per month/per day, all included, and how many days a month they would think of using it.

31.9% of the respondents would prefer a daily lease, followed by 30.9% who would prefer an annual lease (15.3% monthly, 13.6% weekly, 7.7% quarterly).

The average number of days per month that respondents intend to use a coworking space is 5.2 (SD 6.8). About the money, they would spend on average €84.50 (SD 139.20) per month, and €11.80 (SD 25.40) per day, with large standard deviations. The Oneway comparison among countries revealed no significant differences.

2.8 Concluding remarks

This report is a preliminary description of the collected data. In the future, further in-depth analysis will examine in particular the relations between specific individual characteristics of respondents (such as gender, age, type of occupation, job satisfaction) and the identified dimensions, especially the intention to use and the desired characteristics of coworking spaces. In addition, further and more detailed analyses can be carried out in individual countries in accordance with the specific interests of the various universities and territorial partners.

3. The study in Italy

In the following pages, we present the qualitative research carried out in Italy aimed at investigating the demand for remote work and coworking spaces specifically in Éviançon area. This study contributed to the project by developing the quantitative questionnaire for the comparative study (see chapter 2) and by exploring the research objectives. The qualitative research in Italy is divided as follows:

- qualitative data collection and data analysis
- qualitative results.

3.1 Qualitative data collection and data analysis

The research data for the qualitative research carried out in Éviançon area mainly derive from four semi-structured interviews with people who all live in the Ayas Valley. The four interviewees were identified through a network of institutions and word of mouth. We adopted a theoretical and purposive sampling strategy, choosing people who worked

remotely. Interviews lasted for 60 min on average and were recorded and transcribed verbatim. All the interviews were conducted in Italian and the extracts in this deliverable have been translated into English. The participants gave written permission to use their data for research purposes. In order to protect their confidentiality, we used pseudonyms. The interview (see box below for the interview checklist) began with a reconstruction of the interviewee's career choices. Following this, we explored the participants' past and present work experiences; the interviewees were invited to reflect on any difficulties experienced, their achievements, and obstacles to working remotely. The interviews were analyzed as single cases. Below, we present the results of the analysis of the interviews. The analysis revealed the most significant themes for the research objectives and provided useful elements for the construction of the questionnaire for the comparative quantitative analysis (see chapter 2). The final part offers a cross-sectional interpretation of the interviews, enriched by the findings that emerged through activity A. 1.1.

Topics covered during the interview/interview guide

For those who recently decided to move in the Ayas Valley.

The decision to move to Ayas Valley:

- How it came about
- Relationships (neighbors, friends, relatives, colleagues, children's friends, etc.)
- Advantages
- Disadvantages
- ...

Or if they already live in the Valley:

Narration of the interviewee's professional history

(including for those who have recently arrived in the Ayas Valley):

- Key moments
- Moments of change
- The 'relationship' with remote work - when did it begin?

If they have changed job

What kind of work did you do before moving to Aosta Valley or Ayas Valley?

How did you find your new job?

Did you work from home during the pandemic in your current job?

Do you continue to work remotely?

How was it proposed? (Was it mandatory?)

If the company's headquarters are not in the Aosta Valley:

How is your working week organized, and how does your remote work function?

What do you think are the advantages of remote work?

- Flexibility
- Right to disconnect
- Work-life balance
- ...

What do you think are the drawbacks/risks of remote work?

- Isolation from colleagues
- Lack of communication
- Career discrimination
- Excessive screen time
- Too much time at home
- ...

Do you believe that remote work has influenced your work productivity in any way? How?

And in terms of job satisfaction, how does remote work affect your satisfaction?

Do you think remote work influences how you identify

with the company?

What about your relationships with colleagues and superiors in the context of remote work?

What characteristics should remote work have to enable a good/satisfactory work-life balance?

- Timing
- Regulations
- Technology
- Colleagues
- Goals
- Organizational culture
- ...

What does the Aosta Valley or Ayas Valley region offer to digital workers, remote workers, or workation enthusiasts?

- Services
- Infrastructure
- Scenery
- ...

Are you able to do your job well in the Ayas Valley?

We are interested in understanding what makes remote work possible in spaces we've called 'AlpSatellites,' also known as coworking spaces or telecenters – places where people from different companies can work in a space outside of their usual workplace.

What characteristics should these spaces have?

- Where should they be located? (hotels, libraries, town halls, community centers...)
- Who could benefit from them?
- How should they be regulated (e.g. access)?
- What should they offer?
- What technologies should be available?
- Financial support - Who should pay for the use of these spaces?
- Why would it be preferable to work in a telecenter/ AlpSatellite rather than from home?
- ...

Do you personally think you could benefit from these spaces?

From a work perspective, what is your overall assessment regarding the changes you have experienced and the remote work you do?

Do you know people who have a similar or different experience? In what terms?

3.2 Qualitative results

Below we present the results of the interview analysis. First, we illustrate the cases of four persons (Moreno, Elvira, Giovanna and Marco) who live in the Ayas Valley, and then we offer a reading of the important elements that emerged in relation to what facilitates or hinders remote work or the use of coworking spaces.

3.2.1 Moreno recently come to live in the Ayas Valley

Arriving and staying in the Ayas Valley

Moreno lives in the Ayas Valley in Challand Saint Victor, to where he moved two years ago with his German wife and their two-year-old daughter. Previously, he lived in a small town near Cologne, Germany. In Germany, Moreno worked remotely for 5-6 years, and the opportunity to continue remote work in Italy allowed him to make the decision to move to Challand Saint Victor. During the pandemic, he spent two winters in the Ayas Valley with his wife. He worked remotely while his wife, an architect, was on three years' maternity leave, which is ongoing. Once her maternity leave is over, she also hopes to be able to work remotely while remaining in the Ayas Valley. The decision to move to the Ayas Valley was in part to be closer to Turin, where his elderly parents live. Staying in the Ayas Valley permanently required changes to be made to his employment contract (see below 'Employment Contract'). For Moreno, there are also certain essential services that he has found in Challand Saint Victor. Moreover, there is the desire to raise his two-year-old girl in a rural place (sunnier and less rainy) with a better climate than back in Germany.

... we have a little girl and we believe it's the best environment/situation in which to raise her. Then, when she is 13, she'll probably resent us for this decision, but for now, this is it...

The specific context of a rural village (Challand Saint Victor) is a relevant factor when deciding to move. Moreno finds that the village offers certain services – a restaurant, schools, a post office and a nursery – which he deems sufficient; but as he himself admits, they are not enough for some of the population, especially the elderly. The older residents of the village do not share his view and complain about the local offering.

... there is predominantly an elderly population, and the elderly themselves – I was discussing this with my neighbor – complain that there's nothing here. There's a man who is from Milan who decided to move here because his wife is from Verres, but he misses the Milanese way of life: being able to pop out and buy the newspaper, have a coffee. Certainly, living in a rural context like this is a choice you have to make...

We chose the Ayas Valley because, being used to a cer-

tain superior quality of services in Germany compared to Italy, we were looking for a region with specific requirements. We wanted to be in the Alps because I really enjoy the mountains. We chose the Aosta Valley because... when I used to live in Turin, I often spent weekends in the Valley, and our experience is that the services are organized more similarly to how they are in Germany. So, we were looking – especially for my wife who is German – to minimize the cultural shock, such as finding yourself on dirty streets... So, we were looking for a situation... somewhat like Trentino... Here, we're not far from Walser Valley; when we took a trip to Gressoney, all the signs were in German. Therefore, we chose the Aosta Valley Region in search of services with a slightly higher standard than the Italian average, and then the Ayas Valley because it's a valley we know well, since we've spent several vacations here. We also have friends in Arnad.

In summary, it seems that Moreno chose to move to the Ayas Valley because it suits his lifestyle and project for the next ten years, which combine various factors: the services offered in the Alps and particularly in the Aosta Valley Region are of sufficiently high level; he is close to his parents in Turin; the environment is ideal for his family, particularly for his young daughter (compared to Germany).

Remote working and coworking spaces

Why use a coworking space? According to Moreno, at home, there are factors of distraction and dispersion, resulting in poor work output. On the other hand, a coworking space should allow him to focus better on his work.

Of course, I have a beautiful home with a garden and everything, but with my child at home, working and concentrating is sometimes difficult. Therefore, having a coworking space with fast internet connection wouldn't be a bad idea. It would give me the opportunity to interact with other people, make connections and socialize.

These statements are significant because, whilst it may seem that working from home can be a valid option for employees with families, it can actually be counterproductive, as presence of children who require attention and care can be a disturbance that distracts people from their work. On the other hand, a coworking space could enable better concentration while also offering the chance to socialize with other individuals, mostly adults and young people (students). This could open up avenues for dialogue, discussion, and even collaboration and the perceived distraction from other professionals proves instead manageable and even useful.

The notion of engaging in social interaction also leads us to consider these spaces not only as workplaces but also as **social hubs**. Who could benefit from these spaces? Not

just individual workers, but also associations and volunteer groups. Could they use these spaces for free? This raises the important question of funding for such facilities. How can access to these spaces be financially regulated? This will be discussed in Activity 1.4 (feasibility study).

A person who comes to live in the Aosta Valley is considered a stranger. In the entire Aosta Valley, the population is just over 130,000. This means that local communities are very close knit and often connected by family ties. For someone who is not local to one of the valleys, integration is not easy and takes time:

We are building our social network. We have met people who have a daughter the same age as ours; we met each other by chance during a walk; they live in Challand Saint-Anselme. We have excellent relationships with our neighbors. The construction of the social network is ongoing, and with a young daughter, I imagine that once she starts attending kindergarten, we will get to know several families. For now, our contacts are people we have met at the playground... I spoke with our neighbors, some of whom come from Milan, and they complain that the locals keep to themselves and it's difficult to start up a relationship with them. To them, anyone not born in this area is a stranger, an outsider... As you talk to people, you realize they are all related – cousins, siblings, uncles – and you feel a bit lost; not out of place, but dealing with a very tight-knit network. I've come to realize that living in a fairly small region,... connections between individuals are very close. Even in villages far from where I live, I've found myself talking to people who know each other. Almost everyone knows everyone else, but that's normal when you've lived here all your life.

In the end, a coworking space could potentially be a gathering place where individuals who are not local to the valley could connect with a relatively small community. Moreno suggests the interesting idea of a *coworking space as a hub*. It becomes a hub of social interaction, a space for socializing. If this space fosters aggregation, it could serve as prevention against the isolation often associated with remote work, as well as the cultural and social difficulties experienced by newcomers in the Ayas Valley. It should also either offer facilities or be located close to useful services. The idea of a hub also has implications in terms of its physical layout. Areas suitable for conducting meetings or holding gatherings need to be included in the design. Therefore, what should Moreno's *coworking hub* be like?

There could be workstations available, even if you bring your own computer from home, with a connection and the possibility of having your own space. A café would be appreciated because one of the reasons for working together with others, even if you're not doing the same job, is precisely to be able to share breaks, have a

coffee; of course, while maintaining the necessary distance from those who need to focus on their work and don't want to be distracted by noise, since the main purpose is to work. In the Ayas area, the most suitable place for such a project is the Auditorium.

When working remotely, we have lots of meetings, mainly in the afternoon in my case. So, I imagine that if everyone starts holding meetings in an open space, it makes it hard to work for the others. Therefore, one thing to consider is that remote work involves meetings, so you need suitable spaces, such as booths, where you can hold meetings in peace.

There could be also professional benefits, such as interdisciplinary collaborations. If you have physicists, computer scientists, architects and other professionals working side by side, it could lead to the exchange of information and even shared brainstorming projects.

... with the other people in the coworking space, an interdisciplinary environment can be created, where you might have an architect working next to a computer scientist, and they can lend each other a hand. I have a background in physics, and later ventured into computer science, and I have personally experienced this interdisciplinarity in my work.

Employment contract

Moreno works for an American company that doesn't have a registered address in Italy, so he had to find an Italian company to act as a social security representative: *'they had to create a contract to allow me to work remotely from Italy; now I effectively have an Italian contract, in terms of contributions and taxes paid in Italy. However, they effectively had to engage an agency that acts as a social security representative for the company – I believe that's the right term. We had spent the last two winters in Challand Saint-Anselme, but only for a few months at a time, because there's this rule that if you live in a country for more than 183 days a year, you have to pay taxes and contributions in that country. So, we always made sure we kept below that number of days to ensure the German contract remained legally valid.'*

3.2.2 Elvira freelancer in the Ayas Valley

Settling in the Ayas Valley

Elvira lived in Milan and since she was a child she spent her summer vacations in the Ayas Valley at her parent's second home, in places that are very *'dear to her heart'*. The opportunity to live permanently in the Valley arose through a combination of losing her job and the pandemic. She used to work as a journalist on a permanent contract with a Milanese publishing house; however, shortly before COVID-19, it closed the publication. A few weeks spent in the mountains

during the lockdown at the end of February 2020 turned into a new life for her and her two children (5 and 10 years old). Her husband continued to live in Milan:

where I currently live used to be my parents' second home and had been my vacation home since I was a child. Obviously, this has meant that I have always nurtured a deep love and passion for this place. Every time I had to leave, it wasn't just the end of a vacation that left me distraught, but also the fact that I had to detach myself from this place that held such a special place in my heart, even without considering its objective beauty.

By the end of February 2020, the pandemic led to the closure of schools and the abrupt suspension of all extracurricular and sports activities for children. After a few days in Milan, I decided to go up to the mountain house for ten days...

Living in a place with outdoor space and the beauty of the surroundings prompted her to spend the lockdown in the Ayas Valley, but the turning point was the decision to enroll the children in local schools:

Then the schools continued to remain closed, and the time in the mountains was extended... it became more critical because the ski facilities were closed, and they even started talking about closing regional borders. At that point, the first question was: should I return to Milan or stay in the mountains? With the much more favorable environment here for getting through this strange situation and since I have children (5 and 10 years old), two years ago, I chose to stay in the mountains. Here, I have a garden and a balcony, while in Milan I had a nice apartment ... but without a balcony, and on the top floor, which was perfect for an active lifestyle, where you go home only to have dinner and sleep.

The real decision was to enroll the children in school in Ayas. From that moment, it became final. They had already made friends with other children while on vacation at the summer camps, and above all, we had heard that the school choice in Milan would be almost militaristic; so, for all these reasons, right at the last moment, the day before school started, I decided to enroll them here and immediately afterward to move all three of us.

They have lots of friends, in part because they know all the kids in their age range, even if they're not in the same class. In addition, given the limited and safe spaces, my son was able to go out on his own with friends starting from the last year of elementary school: ride his bike, go grab something at the café,

and the great independence that is possible in a close-knit community with social control and where there are fewer risks.

And it turned out to be a fitting and exiting decision: *'an extraordinary experience. For me, it was about coming to live in the place that I love so much and continuing my new journalistic collaboration. So, the enthusiasm that drove that decision is still alive now.'*

In addition to the natural environment, that she considers ideal for her and her children, she also found a job as a freelance journalist a regional weekly newspaper:

Two months after the start of the lockdown, I began working as a freelancer with a regional weekly newspaper, in part because I was very attached to my job and I needed to have something to do. So, I bought a copy of the publication at the newsstand, which I only knew by name, and as an external collaborator, there were no difficulties. So, I started by working from home... I worked as a freelancer, a professional role that has always existed in journalism.

The decision to stay in the Ayas Valley is not without some uncertainties. There are statements that hint at difficulties; the move to the Valley is particularly challenging at the end of the season, when the tourists leave. The closed bars, restaurants, supermarkets and shops and absence of cultural offering makes it hard for local residents:

as soon as tourist flows decline, the mountain empties. Those who come here as tourists are not at all prepared for this steep drop in population and the closure of commercial activities, social venues and a variety of services.

As a consequence, the dark side of the moon is loneliness and melancholy:

Despite my enthusiasm and love for this mountain, as well as my generally sunny disposition, I will admit that the first two times it happened [the fall in population], I had a strong feeling of melancholy because it's very strange, especially for me, who had just arrived... Depending only on friends, who are new friends and not childhood friends, you can feel very lonely, also because, in my case, my partner isn't here either, it is just me with the children. My partner and father of our children manages to join us on weekends, sometimes every two weeks.

... there should be more rotation [in the opening of shops] because maybe you need a little gift for your child's friend's birthday and you only found out a couple of days before, or simply you have to do some shopping and your usual shops are closed, because maybe

there are only two of them and they've both decided to close during the same period, so practically there's only one supermarket left open in the whole Unité.

Being a freelance journalist helps counteract loneliness, the sense of isolation, the lack of relationships and friends. Journalism is the connector of relationships; in fact, Elvira engages with local people to write her articles and then these same people seek her out:

Because I have a job that involves interacting with other, because conducting both phone and in-person interviews keeps you in continuous contact with others; also, working for such a small publication has allowed me to cover phenomena and news events or life stories closely tied to the area; thus, this has brought me closer to the local people. While initially, even though I knew them, it was harder to ask for and obtain interviews, now they come to me to ask me if I can highlight a certain subject, issue, or event, and request to be interviewed.

The social opportunities include sports groups and the folkloric group: in addition to taking part in various mountain sports courses that [my children] can only attend here, we have also joined the folkloric group. First, it was just the children, and then they also asked me to join, as they saw that I was so enthusiastic.

Freelance work is similar to remote work: it can be done remotely and with extreme flexibility. In a way, Elvira was already accustomed to remote work before coming to the Ayas Valley. Losing her job, the pandemic, the decision to move to the Valley, and the option of working remotely are interconnected and interwoven. For Elvira this involves a new life project, facilitated by the possibility of enjoying her parents' second home; for this, remote work (freelance) is of instrumental value.

Coworking spaces

Elvira appreciates the idea of coworking space. Coworking space is valued by people working from home who find the situation challenging due to the presence of family members (children), and a work location outside the home, set up for remote work, would facilitate concentration. But there's more to it than that: it is also valued as a space for social interaction that can alleviate the loneliness of working at home alone.

Coworking spaces would be extremely useful... the loneliness of working from home, which can be fine if it's work that requires concentration, but in reality, in the long run, it becomes quite tough.

According to Elvira, for someone who works from home for a company located outside the Aosta Valley, there's the risk of

becoming invisible/transparent. If you are always at home, working remotely, you can fail to establish any relationships with the local area. Someone who is invisible/transparent cannot be seen, like they don't exist, and this is where a co-working space could help reduce the isolation:

If someone is working for a company in Milan, they move here, they lock themselves away at home to work remotely. They live in Ayas, but they only interact with the computer and other devices, the company, and colleagues in Milan. Here, it's as if they're invisible/transparent; they don't know anyone except the parents of their children's schoolmates.

3.2.3 Giovanna recently come to live in the Ayas Valley

Moving to the Ayas Valley

Giovanna is an architect who has been working for the United Nations for 10 years. Her working base is Nairobi (Kenya), from where she did her interview with us. Her family and lots of friends are in Italy. Since starting work for the United Nations, she has lived and worked between Italy and Nairobi. Two years ago, she decided to look for a house in Milan, but, discouraged by the exorbitant prices and the fact that she can work from anywhere meant that, in the end, she decided to purchase a house in the Ayas Valley.

Working stuck in an apartment when I can work anywhere didn't interest me. During the Covid-19 pandemic, I worked remotely while traveling around Italy, depending on the seasons and places; so, in the summer, I spent almost a month in Puglia, another month in Liguria, so I was pretty much a working nomad.

During her travels, she came across the Maison Poluc project, and in July 2021, she purchased an apartment in this complex, where the offer includes not only accommodation but also a range of services:

including a pool, gym, restaurant, and hotel when they will be open, shuttle to the ski facilities in the winter season.... I'm currently pregnant, so I plan to spend my entire maternity leave there... I decided to invest in the Valley instead of Milan, and it has become my base in Italy.

One aspect that seems to attract her to the Ayas Valley is the proximity of relationships. She describes a less anonymous context compared to the big city:

Having grown up in Milan and lived in international contexts, I love ... the smaller community, where you can get to know everyone: from the hardware store owner to the tailor or the butcher, slowly you begin to recognize faces, get to know each other, and interact in daily life, and there's a more intimate feel, for me is a positive aspect.

However, it's not all positive. The winter season (from November to May), except for Christmas and New Year, when the Valley is full of tourists, can be (as is the case for other interviewees) a very challenging period, where the weight of isolation is felt, and there is the noticeable absence of certain services:

The aspect that, I don't want to say is negative, but that weighs more is during the off-season periods, like May or November, when you can't find a butcher in the Valle because they're all on vacation, so you have to go all the way to Verres to do a big shop.

Working remotely and coworking

Giovanna embodies partially the spirit of digital nomads, people who don't have a fixed workplace. The work travels wherever the person goes, and can be done on a train, at home, in a car (when someone else is driving), in a park, while waiting for the children at their after-school activities, and who knows where else. It can move from one place to another depending on the season; Giovanna mentioned Liguria, Puglia, Milan and Ayas Valley. The key to successful remote work is the ability to work on a flexible schedule and having all the necessary technology. Space, time and matter/technology must be combined to allow workers like Giovanna to work remotely or in coworking space.

For me, all I really need to work is a computer and Wi-Fi and I can work from anywhere. At home, we have shared Wi-Fi, but otherwise even 4G would be sufficient. I can work from the little garden at home, and I'm at ease; I don't have any kind of work-related issues.

She seems very much in favor of coworking spaces as a space that provides the technological support she lacks (a powerful printer – Giovanna is an architect), that creates the conditions for social interaction and offers a pleasant working environment. For Giovanna, the key to the success of a coworking space is how and where the place is organized:

I believe that having a coworking space is something, not just for me, but for creating a community of people who work remotely and is an incentive to get to know each other. Having a similar place that can be frequented. You see, I think the difference lies – and I speak as an architect – in the location. I can't imagine a closed office, without a view of the mountains, without any outdoor spaces, because that's exactly what people doing remote work in places like the mountains are looking for ... so it has to be an extremely pleasant place, a place not only to get to know each other but to enjoy more quality time than at home, even though your home tends to be the most comfortable place.

Where and how to set up these coworking spaces? Giovanna, leveraging her expertise as an architect, is very precise in her description. It should be a place in Antagnod or nearby and above all, it must be a very flexible space, a fluid space:

A place with truly breathtaking views; a space that is bright, that offers the possibility of enjoying a garden or an outdoor area so that everyone can decide whether to work indoors or outdoors; a space that offers coffee or at least an area for food and drink, so from breakfast to lunch to snacks, so that people don't have to go out to get food. It shouldn't be an open space office, but there should be desks, as well as private rooms for meetings or calls with a soundproof door ... and sofas and lower tables for those who prefer working not sitting at a desk. There are a variety of experiences everywhere; even in Nairobi, we have villas that have been transformed into coworking spaces and have exactly these characteristics: a garden, a place for eating and drinking, very fluid and different spaces, and they are realities that work very well.

Employment contract

Working for the United Nations doesn't present any specific issues concerning the country you're connected from. The crucial aspect is to communicate the country you are in and to be available for meetings at the appropriate times:

To work remotely, all I have to do is to provide the address of my location. I believe this is more for bureaucratic purposes like insurance or other matters. For them, the specific address is not important, whether it's my home address or the Bermuda address. What matters is that I am able to work, have a reliable internet connection, and I am reachable during the central office hours of my main office.

This is where the result-oriented organizational culture comes into play: employees are given the freedom to manage their work in places and ways they consider suitable. The important things is that they achieve the set objectives and that they are reachable during the traditionally defined working hours. These hours depend on the time zones of the country where the Company headquarters are located (in Giovanna's case, Nairobi).

The space should be fluid/hybrid/flexible in the utilization of its different areas, in order to meet various demands not only from residents but also from passing tourists staying for a few days or those who stay for several months. Giovanna mentions neighbors who spent the summer in the Ayas Valley working from home and taking their children to summer camps in Brusson or Antagnod, or even the case of a woman on maternity leave in Maison Poluc, whose husband com-

mutates between the Ayas Valley and his workplace and also works remotely.

3.2.4 Marco lives in the Ayas Valley and is employed by a multinational company.

Marco is a graduate in Food Sciences and has been working for an Italian multinational in the food industry for over 15 years, following a career path within the company. From 2012 to 2020, he worked in America. He returned to Italy with his family (wife and three children) two days before the 2020 lockdown:

I arrived two days before the lockdown in Italy... There was that period during the pandemic when the concept of remote work or telecommuting took off. So, initially, it was a period where people worked remotely even 5 days a week, because they had young children, etc. After that, when I started working in Research and Development with international laboratories, I chose the option of working remotely for two days a week and spending three days in the office.

Today, working between Antagnod and Piedmont, he oversees the product development of the company in three geographical areas: China, India, and Mexico. He describes himself as different from a tourist who works in the city and goes to the mountains on weekends: *'On the contrary, I live in the mountains and commute to the city for work for those three days a week.'*

Remote work

In the company where Marco works, remote working already existed before the lockdown. For some roles within the company, people could work from home one day a week. Now, the situation has changed significantly; as we know, COVID-19 has legitimized the possibility of working remotely. For Marco, as for other interviewees, remote working requires a cultural shift; it implies working towards objectives for both managers and employees.

The employees must guarantee they get the work done... the manager must be able to adapt to work based on objectives, not on the hours worked by employees. For me, it's a change that I believe is quite challenging, even in Italy in general, and it's something that we need to embrace more and more.

His company conducted a survey among all employees after the pandemic on the value they attributed to remote work. They carried out experiments where, for example, they proposed one day a week of remote work and other periods spread throughout the year. This was an alternative proposal to the two days of remote work and three in the office. The survey revealed a desire to continue with remote work because, in many situations, it represented:

an improvement in personal life and was not, so to speak, restrictive in terms of work activity. This led the company to move in this direction by offering these two systems. Recently, I have been working in the office on Tuesdays, Wednesdays, and Thursdays; so, I come down on Tuesday morning and return on Thursday evening. I spend two nights away from home.

Marco can be described as a remote work enthusiast. He appears to be a successful case of remote work: *'I feel very comfortable with it. Moreover, I believe that, from a work perspective, the results are sometimes even better'*, which can also be attributed to the fact that at home, despite having three children, there are no distractions. He talks about the home workspace as a place that should be peaceful: *'without children, dogs, cats, people coming and going, so you can work and be more productive than in the office... at home, you are alone and have fewer opportunities to get distracted.'* His children have been taught to understand that if Marco is at the computer, he should not be disturbed: *'Luckily, we have a big house, a house that is spread over two floors, where my mom lives downstairs. So, they know that if I'm working and have meetings, they shouldn't wander around. From that point of view, we are fortunate in terms of space. The children know that if I'm sitting at the computer, they mustn't disturb me and they have to be quiet.'*

His experience has taught him that working remotely for the entire week is not feasible because he needs to interact with colleagues in person. He is not against the distractions that can occur in the office (e.g., coffee breaks) because he recognizes that these moments are important for building relationships with others.

Remote work has developed the teleconferencing systems that used to be meetings connecting only two groups in different locations. Today, multiple users can connect simultaneously, sometimes meaning that, even to talk to colleagues next door *'we talk to them via computer and don't get up from our desks to discuss work.'* Remote work also has the advantage that meetings start and end *'exactly on time.'* Furthermore, among the merits of working remotely, he recognizes flexibility: *'working in three different time zones... it can happen that I have to work maybe 10-12 hours in total. If I'm working from home, this is obviously easier because... if I have a meeting maybe at 8 in the evening, I can easily take part, and maybe earlier, from 6 to 7, I can do something else. Before, if there was a meeting at 8 in the evening, I wouldn't have taken part because I didn't want to be [at the office], unless it was important.'* Remote work, in other words, helps manage time and schedules more efficiently.

Among the negative aspects, there is the loss of human contact (meaning direct contact): *'perhaps it's not so important for the work itself, but since we spend a significant portion of our lives at work, sometimes it can be.'* In terms of relationships, Marco emphasizes an important aspect for the success of remote work, which is trust, *'I think a focal point*

is that you need trust in your associates/employees', which is combined with goal-oriented management. When employees are at home, managers do not have direct control and must trust them; they must accept not having direct oversight and focus more on what the employees produce/achieve, on the results they attain. According to Marco, this is a necessary mindset shift for the success of remote work and also for the creation of coworking spaces.

There is a significant shift in the perception of work, well, this is one of the biggest challenges. I would say especially in Italy, yes, in Italy, because based on my experience traveling a bit, there are countries, especially in the Nordic region, where they have been following this approach for longer... I remember that at the university in Denmark where I did my Erasmus, there was a professor who would go grocery shopping in the middle of the morning... I thought, 'what a strange world!'; but they said they worked based on objectives. So, it was better for her to do the shopping in the mid-morning because it fitted in better with managing work and family... So, she managed her time autonomously, aside from her commitments, of course, such as lectures and meetings she had to attend.

Marco suggests that if the employee is given the right objectives, they are more inclined to ensure that they are achieved. Whereas in a system based on monitoring the hours of presence, the employee may think, 'as soon as my time is up, I'll drop everything and leave.' Furthermore, along with the right objectives, being at home can also be positive 'because the employees still have lunch with their family, maybe see their children getting back from school, and greets them. They might not spend two hours a day in the car, depending on the traffic, and so this can be a positive aspect.' Marco's hypothesis is that remote work has positive effects on individual well-being, and therefore, the worker is willing to give '110 percent to the company they work for and to their supervisor.'

The coworking space

It's interesting to note that when Marco describes the coworking space, he is thinking about non-residents (tourists), meaning he is not imagining it for resident workers in the Ayas Valley. Why is this? Perhaps because, from his perspective, there are few people working remotely? This is an important point because it helps identify who the potential customer of a coworking space might be. Marco's interview continues, and he is very clear in outlining the characteristics of these spaces:

The first fundamental point, which is crucial to discuss with many people in the Ayas Valley, is the internet connection, as here in the mountains, the connection is the main problem... So, if I have to imagine that I'm on vacation in an apartment... and then I lose connection, but I have an important meeting, I'm not sure if my connection will hold, this is a fundamental issue.

Because if there's a simple meeting or one with a colleague, I can pick up the phone and call, but if it's an important meeting, I must be certain that the connection is perfect. So, in my opinion, this is the main reason why a person would go to a coworking space... In the mountains, when there's a thunderstorm, the connection may not be perfect, but if it happens once, it's okay, especially due to extraordinary circumstances. However, the goal is to truly guarantee a sufficiently high level, and this is the foundation of everything.

If the first fundamental characteristic is an excellent network connection, the second is the aesthetics of the space: 'Since the person coming here is on vacation, search for a fairly welcoming center... let's say not like a chicken coop in production. I would also emphasize the view, in the sense that it can truly make people feel good at work.' As with other interviewees, one essential factor that can make a coworking space attractive is the view it can offer. A view that overlooks the mountain landscape, with the green, white and blue, the colors of the mountain, which are so beautiful and variable depending on the seasons.

In my opinion it should be something beautiful but not distracting, right? In the sense that the view of a landscape is beautiful and not distracting, the view... I don't know – and I might be saying something trivial – the view of a pool, with people around, can be distracting. If I have to put it in a basement, it's true that I have artificial light and a perfect connection, but I feel a bit... I don't have the same mood as I would if I had a nice window with a view of Monte Rosa, for example. Of course, it should be a quiet space.

The offering would need to be completed with convenient parking and a café nearby where you can find what you would typically eat and drink at the office and perhaps a little more. A space like this costs money and this could be funded by:

a payment by the worker; so hourly, simply, or, in my opinion, you could also create a slightly more structured system. In my opinion, both options could work. A more structured system in which the family that books a vacation in a hotel is offered the possibility of using that space from Monday to Friday.

Who are the people who might be interested in a coworking space? Here's how Marco describes them:

- tourists who want to spend a workation period in the Ayas Valley: 'I always think of tourists because I believe it's a valuable service that can be offered in terms of tourism.'
- tourists who want to move there: 'Let's say I go back to Milan only when I have an important meeting or an in-person meeting. The rest of the year, with my family or during the winter, I spend my time here because I want to sign my kids

up for skiing lessons, so I relocate... If there are people who come to live here thanks to this, they are welcome. There's always the need for the local population to go up rather than down... So, it can be a positive factor for both things, even for local residents who don't have to move away to work.'

- Residents who will not spend money for a strong connection at home. This could also help counteract depopulation: *'An engineer, after university in Turin, may go looking for work and then eventually move. Maybe they say, "I'm looking for work, not in Turin, but in Miami because I know I can work remotely, so I'll stay here, invest in the area, and work."*

3.3 Concluding remarks

In this final section on the qualitative research carried out in the Ayas Valley area, we address the following questions:

- What promotes remote work and the use of coworking spaces for established residents, for newly arrived residents and for tourists in the Ayas Valley?
- What should be the characteristics of a coworking space in the Ayas Valley?
- What are the barriers to remote work and the use of coworking spaces in the Ayas Valley and in other areas?
- What promotes remote work and the use of coworking spaces in the Ayas Valley and in other territories?

3.3.1 Remote work and coworking spaces for established residents, newly arrived residents, tourists and nomadic workers in the Ayas Valley

Established residents

For residents, remote work and the use of coworking spaces are encouraged by:

- Having access to fast Wi-Fi and devices (computers and printers, etc.) that are not available at home;
- Maintaining and improving a network of relationships that are otherwise absent when working remotely from home.
- Proximity to other activities outside of the home, i.e. if the coworking space is located near other useful places/services, there is greater incentive to use it, so it's location should be strategically thought out.
- Experiencing a pleasant and beautiful place that, in addition to providing a workspace, also offers facilities for other activities (meetings, presentations, etc.).
- Preferring to stay and work in the Ayas Valley rather than commuting to the workplace, for example, in Aosta or another region.

Newly arrived residents

For people who have moved to the Ayas Valley, remote work or coworking spaces (and staying in the Valley) are encouraged because:

- remote work (working from home or in coworking spaces or other locations) helps people achieve personal projects that are not only professional goals but above all a change in how they live;
- the lifestyle project unites and interweaves family, social, cultural, environmental and professional elements;
- an important part of these life changes is the opportunity to live in a natural environment. The environmental/naturalistic element appears highly relevant and takes different and coexisting forms: love for nature; love for outdoor sports; the search for a healthy place, understood as a place to raise children in contact with nature.
- the companies for which people work support these life project/changes by their employees. There are companies/organizations that have embraced the logic of remote work and support their employees in making changes in which remote work is instrumental to achieving personal and family aspirations, as well as organizational results.

Tourists and nomadic workers

For tourists and nomadic workers, remote work or the use of coworking spaces is encouraged by:

- having a strong and powerful wireless network not provided by their accommodation or hotel. A powerful internet network (high-speed fiber) and advanced printer for downloading, working, sharing and printing large files, and spaces for conducting meetings in person or online are factors that encourage the use of coworking spaces.
- offering a quiet space, especially in the case of tourists who are traveling with family (distractions and disturbance).
- opportunity to engage socially and culturally; this aspect is not as important for one-off visitors.

One critical issue to be considered is the high costs of rental accommodation, which make long stays in the high season unfeasible, except for cases of tourists with second homes.

3.3.2 What should be the characteristics of a coworking space in the Ayas Valley?

The coworking facility must achieve a suitable balance between **open spaces**, where individuals work alone, and **closed spaces**, i.e. soundproof areas where people can hold meetings in-person or on-line. The design of coworking spaces must take into account the fact that users might have specific work-related needs, for example tourists or workers who need to communicate with people who live on the other side of the world, in different time zones. How can these needs be supported? If online meetings need to include participants in America or Japan, what should be the opening and closing times for coworking spaces? And if there is a strong internet connection and suitable spaces for group activities (e.g. meetings), how can they be used most effectively? For example, they can be used for film screenings and discussions, hosting in-person or on-line meetings, etc. Who would be responsible for management and maintenance?

And what management approach should be adopted? What would be an appropriate salary or reward for those in charge of managing this service? These are aspects to be taken into consideration that we will address in the feasibility study (Activity 1.4).

Coworking space must be designed as a fluid/hybrid, flexible and multipurpose/multifunctional environment. It cannot be just an open space with some computers and a powerful wireless connection; it must be designed with an appropriate balance between individual offices, open spaces, rooms for meetings or gatherings, as well as areas for refreshment and relaxation. The coworking space must address particular needs unique to the area of its location and not only respond to the needs of tourists.

Coworking spaces must offer remote workers something different and better than what they can find at home. What is this 'something' that motivates someone to leave the comfort of their home or accommodation to come and work in this space? This 'something' will depend on the person seeking a space in which to work remotely. For this reason, the coworking space must be conceived and designed as a fluid and flexible structure to satisfy different needs. In summary, where and how to set up these coworking spaces? The interviewees suggest:

- where there is a strong wireless connection;
- in a location as exposed to natural light as possible even during the winter. The Ayas Valley is quite long and opens up in the central part (between Challand Saint Victor, Challand Saint Anselme, and Brusson), which means it has greater exposure to sunlight for longer. Therefore, according to one interviewee a coworking space would ideally be located in the middle of the Ayas Valley, to benefit from maximum natural light;
- in a location easily accessible by car (with parking nearby) or by bus;
- in a place where other services are available nearby, including at least one place to eat. The **coworking hub** could have a positive impact on local businesses and act as a catalyst for the creation of additional services, for instance, it could serve as a parcel collection point, or provide space for childcare or even for a gym, etc.
- with suitably equipped space for socializing, relaxing and food&drink;
- with a room for holding cultural meetings/seminars/workshops, also to alleviate the isolation of living in the Ayas Valley during the low season;
- with soundproofed spaces or booths, where online meetings can be held with colleagues scattered around the world;
- In an area where the specific needs of workers (not only tourists' needs) have been identified/individualized;
- in a place where remote workers can also work outdoors with a strong wireless connection: a green space, a garden where they can continue working or take a regenerative break.

There remains one important question: what is the economic/financial sustainability of a coworking space with these characteristics? Could the companies/organizations (public or private) for which the users work contribute to the economic/financial sustainability of these places? These are aspects to be taken into consideration that we will address in the feasibility study (Activity 1.4.1).

3.3.3 Barriers to remote work and to the use of coworking spaces in the Ayas Valley and beyond

1. In two municipalities in the Ayas Valley (Challand Saint Victor and Challand Saint Anselme), broadband fiber optic is not available, and therefore, there is no fast internet connection, which is the first requirement for creating a coworking space.

The issue of broadband in Challand-Saint-Victor ... they have laid the infrastructure for broadband throughout the Valle d'Ayas. However, for some reasons that I'm not entirely sure of – I also wanted to discuss this with the mayor – they had entered into a contract with a company that has since gone bankrupt. Because they committed to this company, they cannot switch to other providers, leaving the whole Valley connected except for St. Victor and St. Anselme, which were excluded from the cabling. (Moreno)

Workers who require fast fiber optic internet come up with solutions to tackle this tech-related problem:

I have now subscribed to Vodafone, so there are private solutions available, such as a radio wave fiber, which gives me a fast internet connection, but I had to do my own research to find it. (Moreno)

2. In general terms, for those who have relocated to the Ayas Valley, one obstacle to them staying – and therefore using coworking spaces – is the poor offering of social and cultural opportunities. People who arrive in the Ayas Valley from another region or country need to create a new network of relationships, both professional and social, and difficulties in achieving this can influence the decision to stay or leave. Having children can make it easier, with friendships created at school, for example, inevitably leading to relationships with other parents, which helps to alleviate feelings of isolation and loneliness. Alternatively, meeting people requires a more proactive approach while out and about in the area. It's important to emphasize that even established residents in the Ayas Valley are not necessarily immune to feeling melancholy or lonely at the end of the tourist season. Therefore, a coworking space designed to promote social interaction, not just individual workstations, could be a preventive solution against this sense of isolation.

3. Another obstacle to the development of a coworking space is the extremely high costs of accommodation, especially during the peak season. If we consider a tourist who intends to come and live in the Ayas Valley and work remotely in a shared space with others for several months, one barrier to this decision is the very high rents. Encouraging affordable rentals for these second homes should be a priority. Additionally, it's worth noting that numerous properties in the Valley are second homes owned by non-residents who might be genuinely interested in coworking spaces.
4. The lack of an adequate local public transportation network (here we are referring specifically to the Ayas Valley and not to the Aosta Valley) is also a barrier to the development of coworking. To live in the Ayas Valley and reach the locations where a coworking space might be established, as well as to access numerous services or shops in general, owning a car is almost essential and sometimes even, one car per family is not enough. Naturally, this affects both household expenses and the environment. Additionally, it's important to keep in mind that having a coworking space does not eliminate the need to commute. The interviewees tell us that they still have to go to their company/organization's offices on certain days.
5. The local job market is characterized by *'many job opportunities, but they are often unskilled, with many jobs in the tourism, restaurant, or hotel sectors. This means many young people can stay in the area, but they may end up doing low-skilled jobs.'* Typically, these low-skilled jobs cannot be performed remotely.
6. For foreign workers, one of the major obstacles preventing employees of non-Italian companies from working remotely depends on the type of employment contract. There is a need for more flexible legislation that facilitates the mobility of workers from one country to another. Legislation that would allow, for example, someone with a contract in another European country to work from Italy and pay taxes in our country (without double taxation). This is a problem that needs to be addressed and resolved at the European level:

So, to attract foreign users [contractual regulations need to be taken into account], especially considering that remote work is currently more widespread abroad than here, there is a need for regulatory simplification, but this goes beyond national policies; it needs to be at European level. From a work perspective [since I moved here], my quality of life has improved... What is needed is that European policy allow foreign workers to work remotely, even from another country, even if they have a contract in a different country. (Moreno).

3.3.4 Factors that promote working remotely and the use of coworking spaces

Beyond certain technical features (e.g., internet etc.) and comfort that we have highlighted, there are two aspects that are revealed as very relevant and interconnected, which should be considered as necessary elements for coworking spaces.

- An *organizational culture* that encourages management by objectives, supporting the idea that what is important is to complete the task and leaving the methods, spaces and times to the discretion of individual workers, taking into account mutually defined company constraints. A culture that values and rewards workers' skills and that does not seek to control the worker – control that can be exerted when the worker is present in the workplace – and fosters individual accountability.
- Connected to the previous point, it is important for leaders/managers and collaborators, employers and employees to build working relationships based more on *mutual trust* than on control.
- Consistent with company constraints, it is important to have a certain *level of flexibility* in working hours, especially the freedom of employees to define their own work schedule:

... I have a lot of flexibility in my schedule, so now that we're done with the interview, I'm going for a walk with my dog and have the opportunity to interact with other people. The downside now is that when I take my dog for a walk, I go through the woods and then into town, but everyone is at home... (Moreno);

- There is a need to find an *accessible space* that is ideally accessible 24 hours a day, depending on individual work requirements and the need to hold meetings with people abroad.
- There is a *need of specificity*. The coworking space must address particular needs unique to the area of its location and not only respond to the needs of tourists. This implies that, considering the differences within the Ayas Valley, coworking spaces should ideally be constructed in three distinct areas, each with different needs: the high Valley, middle Valley, and low Valley (refer to deliverables 1.1 and 1.3).

4. The study in France

Located in the south-east of France, the region called *Pays du Grand Briançonnais, Ecrins et Guillestrois-Queyras* covers 36 municipalities grouped into 3 inter-municipal communities with a total of 35,279 inhabitants and covering 2,138 km². The table below presents some of the main indicators for the region, divided into 10 topics: population dynamics and characteristics, main economic indicators, labor market dynamics, jobs and economic activities, technological infrastructures, services present in the area, geographical features, potential spaces for coworking, public laws and HR policies and attractiveness for tourists. Later, each point is explored in greater depth. The presentation of the study carried out in France is divided in the following sections:

- qualitative data collection
- results.

4.1 Qualitative data collection and analysis

Qualitative data were collected through interviews and non-participant or participant observations. The interviews (21 in total) took place from January 2023 to May 2023 in the French region under study or via videoconference with non-residents of the valleys. The participant and non-participant observations were gathered by means of the French workshops in Activity 1.1. An audio recording was made of the discussions at the various tables during the workshops in Activity 1.1. Interview guides were prepared to enrich the results obtained with the questionnaire. The interview guide was constructed around three main topics: 1. How to attract/retain/assist remote workers/coworkers? 2. What is the link between working remotely and work environment? 3. How can remote working communities be made sustainable? As mentioned earlier, our research also incorporates qualitative data obtained from 21 interviews and 19 observations. The collected recordings were transcribed before being analyzed. We then conducted a content analysis of the “communications” according to Bardin (1977). For this purpose, we developed a custom tool using an Excel workbook. This content analysis employed thematic coding (Blanc et al., 2014, p.556), with the primary goal of identifying both pre-existing and emerging findings in the literature. The objective was to understand the specific challenges faced by mountain territories in implementing policies for enhancing their attractiveness for remote workers. To organize and analyze the data, we integrated the interview verbatims into the tool, along with their corresponding metadata. This allowed us to group the data into various tables, such as by transcription and by different levels of codes (1, 2, 3, or 4). Additionally, by triangulating the data with a list of emerging codes, we were able to identify directly unique results, as described earlier.

4.2 Quantitative e qualitative data analysis

4.2.1 Remote workers in the mountains: personal and professional characteristics

Although they are of all ages, it seems that the majority of remote workers are young people between 20 and 40 years of age (H1). During our interviews, it emerged that remote workers are more likely to be single (F1), less likely to be families with children or couples with plans to have children in the short or medium term (F1). T11 is married and lives in Lyon but when she comes to work from home in the Hautes-Alpes, her spouse doesn't come. From a professional point of view, remote workers have different profiles. Most of them work in intellectual occupations. Some are architects (T13), journalists (T13), computer scientists (T5), graphic facilitators (T6) and others, who work as self-employed entrepreneurs (T1) and represent the majority of the remote workers interviewed. Others are project managers (T11), managers (T4) and employees (T10). Most of these people are educated and work in positions of responsibility (H1) with fairly high incomes (R12). Some remote workers seem to perform several professional activities that do not necessarily involve working remotely. For example, T13 told us that he is a salesman in a bookshop and that the person who shares his office in the coworking space is also a mountain guide. He adds that remote workers have “*profiles that juggle quite a lot of activities*”. We find this notion of multiple activities within the same professions: example, T6 and T2 work on several projects at the same time. It's mainly self-employed entrepreneurs who do multiple activities. Since the health crisis, it appears that the profiles of remote workers “*are diversifying a little*” (F1) and this can be explained by the fact that “*remote work became more acceptable after COVID-19*” (T12).

The special case of the digital nomads (H1) should also be taken into account, as they don't have only “*their own house, they are starting to multiply the number of places in which they feel 'at home'*” (H1) and although they are nomads, they come regularly for fairly short periods which, added together, become substantial. The H1 host gives us the example of “*someone who comes for 2-3 months, leaves for 1 month, comes back for 2-3 months, leaves for two months*” and “*they come from all over the world*” (H1).

Although they meet the criteria of our definition of remote worker, some interviewees do not feel that they are strictly speaking a remote worker (T2). In the case of T2, there is an inconsistency between what he says and how he describes himself. Whilst the notion of remote worker appears to be a source of individual dissonance, it is also a source of collective dissonance. At the regional meetings, the question “*What is remote work?*” was answered in a variety of ways. For example, two people in the same situation did not both see themselves as remote workers. Notably because “*there are people who just do it a few times a week and on the other side of the spectrum there are people who do nothing else*” (H1).

However, T2 volunteered to be interviewed in a semi-structured interview as a remote worker. The same is true for others, such as T4: *“I don’t consider myself a remote worker but a seconded worker.”* There is thus an inconsistency between what they say and how they describe themselves, which shows the complexity of the very notion of remote worker for the public. Regardless of how they see their situation, working remotely is seen as a condition of mobility (F1). Finally, they use it to be able to live in the mountains (T13) in areas where there is a lack of jobs in their field: *“at the start, I was really looking for a salaried job in the area to work with other physicists, but there was nothing available in my field, so I created my own job”* (T1).

In the case of T4, he moved to the area to work from home as an employee, which he negotiated with his employer, but in other cases the employers themselves have voluntarily imposed (T7) remote work, even going so far as to do away with the offices (T7) at the company headquarters, allowing employees to move (T3) wherever they want. This taste for freedom may lead them to seek only *“100% remote working”* (T3). As for the self-employed entrepreneur[s] (T8), their situation is intrinsically linked to remote working, whether full-time or part-time. Although remote work was a practice *“already emerging before COVID-19”* (T13), it seems that this health crisis *“put the spotlight on it”* (T13). Nonetheless, it seems that the forced working from home during COVID-19 is different from remote work today: *“it’s a new way of working after COVID-19 ; during COVID-19, we only saw each other via videoconference”* (T17) and there has been *“strong growth in requests”* (F1) with new profiles: *“since the health crisis, we’re starting to see profiles that are diversifying a bit”* (F1). This diversification also seems to apply to certain practices. Indeed, this seems to be similar for nomadic working, with an increase in the use of co-living spaces: *“more and more people are doing it”* (H1). Other nomadic remote working practices are also emerging, such as *télévrouac* (T7), which simply consists of remote working in a bivouac (T7). Finally, the health crisis and the experience of imposed remote working (T13) has favored the social acceptability (R7) of this practice.

4.2.2 Remote workers’ needs

Remote workers have specific needs, which may be intrinsic (relating to personal desires and enjoyment) or extrinsic (performance of tasks according to incentives and supervision). In their comments, the interviewees remained very focused on the extrinsic elements of their work, with little mention of the intrinsic elements. The most plausible interpretation is that the intrinsic elements do not pose any problems and play little part in decisions to settle in the area. The extrinsic needs expressed by the remote workers we interviewed include in particular the desired living/working environment. In this respect, two factors come to the fore: the size of the area and proximity to nature. Remote workers in mountain areas want to live in an area that is *“on a human*

scale” (F1) and close to nature to *“have space”* (F1), to have *“opportunities after work”* (F1). As far as their quality of life is concerned, the remote workers we interviewed want to live in a healthy environment *“with less pollution, greater safety”* (F1), which also achieves a good work-life balance. One of them explained to us that *“compared to other couples, we can see each other at lunchtime ... it’s true that remote work gives us more opportunity to see each other, not necessarily as a couple”* (T1). They would also like to have more time *“for personal life”* (F1), *“to do some sport”* (F1), *“to create a life outside work”* (F1) and to spend more time with their family members, in particular by saving on travel time (F1). These first two elements (environment and quality of life) are mentioned in all the interviews. Some remote workers spoke of *“an awareness of climate and environmental issues”* (F1). It also seems that the new ecological values shared by the majority of the remote workers we met (T1, T3, H1) are altering their needs and expectations regarding their living environment. The founder of a support program for remote workers told us that remote workers want *“a life that is more in line with current values and trends because they find they need something else at some point in their lives”* (F1).

If we’re talking about living in a place, we’re also talking about housing. The region has a lot of second homes, and in some municipalities, as many as 80% of houses are second homes (R15). During the meeting in the Guillestrois area, the problem of the lack of housing was revealed to be more than just numbers and percentages: even where there is housing available, *“the quality of the stock is not good”* (R2), and there was even talk of an *“unhealthy town center”* (R2) in Guillestre. This housing *“does not correspond to urban standards”* and requires renovation (R3), which is expensive (R3), so it doesn’t appeal to people who come with *“a different standard of living and therefore a different need”* (R3). This lack of supply can be an obstacle to long-term settlement for some remote workers, who, although they have managed to find a flat to rent, would like to buy a home in the area: *“for the moment it’s not urgent because we’re fine where we are, but I think we’re going to end up finding it frustrating, having little access to the property market here”* (T8). T8 added that he was considering *“going down the valley”* to look for a house. Others were fortunate not to have such worries: *“I was happy I had this studio apartment before I came; it was a factor that even made it easier to settle in because I already had a place to live”* (T6). There are various reasons why people may already have a home in the area; in the case of remote workers originating from the region, it may be *“a family home”* (T5), or *“a very small flat that was not supposed to be my main home initially”* (T6).

From a professional point of view, remote workers in mountain areas also have needs since they express, for example, the wish to maintain a certain *“job comfort”* (F1), or even a certain level of salary thanks to their job in Paris (F1) despite their new choice of place to live. Remote workers in mountain areas need both good accommodation and reliable equipment, i.e. more affordable property (F1), and an inter-

net connection (T13) and a small area of office space (T13). But also a space with a proper desk (T11) to “spread out a lot of things” (T11), a storage space (T2) because they need to store equipment (T2) and, of course, a computer (T6), which is a need shared by all the remote workers interviewed and which seems to be essential for remote working. As far as the Internet connection is concerned, it should be noted that while some people require “a good network” (F1), depending on the remote worker’s activity, the connection does not have to be extremely fast: “After all, others work on films with editing etc., so they need a high speed connection, but I’m fine for what I do” (T13). On the other hand, while not everyone needs a very high speed connection, the connection remains the criterion most often mentioned in the interviews and focus groups when asked what is important for a remote worker (H1, T13, F1, R13). As far as optical fiber is concerned, it remains an important factor in attracting remote workers, as two hosts of a coliving space testify: “we’ve already had requests from people asking what modem we had and before we had fiber, we explained that we didn’t have optical fiber, but it wasn’t enough for them” (H1).

Remote workers in mountain areas also need to travel. So they generally need to be close to a city (F1). This proximity is most often measured by the transport time needed to get there. For some, this time can also be seen as an opportunity to take a break (T1) through meditation or movement (e.g. cycling, walking). Remote workers can live in both rural and urban contexts, so we see different mobility situations depending on location, even if the general trend is “for people who come here, ... it’s complicated when it comes to public transport” (H1).

While there are some public transport solutions in Briançon, it’s not the same elsewhere, like in L’Argentière la Bessée. We still have a car, so we have our own private mobility, so we can use public transport, but we have a back-up solution. [Some people don’t have a car at all, and] I think we’re shutting out this whole section of the population”. (H3) It’s worse in Queyras, where everyone has to have their own car and one couple even said “but here you need two cars!” (R8). But some remote workers don’t really like to use their private car “for ecological reasons” (T1) and some don’t have one at all: “a lot of people don’t have a car” (R19). But here, “when you don’t have a car, not having transport is a problem when you go exploring” (R15). To solve these problems, changes are coming, but it seems that they will be modest: “Mobility is certainly important, we’re not going to overhaul the entire system, but we’re going to change” (R15).

Finally, remote workers based in mountain areas need to be easily reachable for family and friends, especially if they have children: “My parents are 6 hours away by car, we see each other a lot less than before. My father Raph is in Grenoble and it’s true that when you have children, it’s nice to have the grandparents around” (T1).

Remote workers also need social ties. This social link can come from friends and from other remote workers or work colleagues. In the case of remote work in mountain areas,

people need “facilities that prevent them from feeling isolated” (F1), “to eat with people” (T13) and “informal events” (T13) or the “informal side” (T13) that physical social exchanges allow (chatting, coffee machine, etc.). To meet these needs, they have to be proactive, “you have to get moving” (T6) and get physically involved in things locally outside work. It seems that remote workers often have travel experience, which has given them “the skill of being able to integrate other than through work” (T1). This can take the form of participation in associations (T1), voluntary work (T11), sport (T3) and other activities. Remote workers need “a fabric of associations and social life” (R3), which provides opportunities for integration.

Finally, many of the remote workers interviewed expressed a real need for freedom. For them, it is important not to be “constrained by schedules” (T1) and not to be tied to one place (T1) forever.

Being a remote worker allows a certain amount of freedom in terms of place of work. Some remote workers alternate working in cafés (T6), libraries (T11), third places (R4) and, more traditionally, at home (T9). This plurality of workplaces gives them the freedom to choose their tasks according to where they are. Some coworking spaces might not be very comfortable, so working from home can be an advantage, in particular when it comes to work that requires confidentiality (T4). Secondly, frequenting different spaces helps to maintain a certain boundary between private and professional life, in particular for couples when they both work remotely: “It’s not a good idea, we’re both very tired from work and having a young child, and it’s also intrusive for the couple to be working in the same place. Yesterday I was having a conversation with my colleague about work and [my husband/boyfriend/partner] was listening in a bit, even though it’s none of his business; he might voice his opinion even though we don’t work together. Or, on the other hand, I might ask him something when he’s working but he’s not available to deal with private things [because he’s busy]” (T1). Third places need to take into account these factors by offering appropriate facilities (R16) and establishing a climate of respect (H3).

To decide whether they will migrate to the area, gathering information (F2) seems crucial to determine what is available on the territory. It appears that in our territory, “there is not much information available” (H1), especially regarding buses (H1), third places (H2), or community life (R11) – which relies more on network communication (R11) – and information that is in English for international individuals (R11).

4.2.3 Why do remote workers want to live in the target French territory?

All the remote workers interviewed seemed to come for a common reason: the mountains (T5, T11, T4, H1, etc.). What’s more, it emerged from the interviews that this area of France is very attractive (R3) also because it offers a better living environment (T1), which makes people feel “more human” (H1) as they are surrounded by nature (H1), which they

can enjoy after a day's work. So, there are several factors that render the mountain environment more attractive: firstly, people are able to practice sport (T13) even "after work in the evening or lunch break" (T11), which they would not be able to do in the city. Several remote workers report being keen on outdoor sports, such as skiing (T8), snowboarding (T4), climbing (T1), sailing (T11), cycling (T3), etc.

Secondly, the area benefits from a strong "social and community fabric" (R3) and a better-than-average cultural life (R9). But also, they save on daily travel time, as compared to the big city (F1) and enjoy a more authentic way of living (R16) with a lower cost of living because they are "less tempted to spend" (R8). In short, this area is considered perfect for remote working (H1) because it has both internet and transport connections as well as everything else.

In general, the mountains were the decisive factor in choosing this area: "It was my ultimate dream when I was a teenager to live in the mountains" (T2); living here allows people to "recharge their batteries" (T6). H1 is a host who tells us that a friend found the area after doing an internet search for "mountains, snow, sun" on the internet, and others report that the area offers "optimal weather conditions [...]" (T11). Some even look to the future, considering the benefit of living there in the light of global warming (R8) because it's cooler in the mountains than elsewhere.

4.2.4 A balance between opportunities and constraints

Remote work has more recently become one of the conditions required by some workers. Thus, remote workers can take advantage of this situation to change their place of residence, either already working remotely in an official sense since the COVID-19 pandemic (T14), and having continued to do so because "companies realized that we were doing a pretty good job" (T14), or having worked remotely in an informal manner since prior to the first remote work contracts (T9). Others have chosen to seize the opportunity to work remotely and relocate, informing their employer that "I had made my decision and that I was moving away" (T5), or leaving their job to take another one remotely (T4, H3). Finally, faced with a lack of local job opportunities in their field, some people have opted for remote work by going self-employed: "at the start, I was really looking for a salaried job in the area to work with other physicists, but there was nothing available in my field, so I created my own job" (T1).

Although T5's decision may seem abrupt as described above, it is important to note that a transition was made. Thus, even though they imposed their decision on their boss, they "warned a year in advance" and even though their boss "wasn't thrilled ... for the first three months, we did the work, they started looking for people to replace me, and likewise, through video calls, I interviewed potential candidates who wanted to take over the position, and then we saw 2-3 candidates. It didn't work out, so I continued working, and in March 2020, due to COVID-19, they told me they were stopping everything and that all architects had to work remotely. The

company had 120 employees, so they had to find a solution for everyone to work from home. Mission accomplished because, within a week, those who could work remotely were equipped. Little by little, it brought us to the point where we now work remotely full-time" (T5). We can clearly see the need for a transition or "negotiation" (T3) for employers to accept the change, sometimes with conditions, such as using a coworking space (T3). Other times, it is part of a longer-term acceptance process with increasing remote work time granted (T14) each year.

The employer is not the only one who needs to prepare for the employee's transition to remote work during this life change. When moving as a family, even if one is familiar with mountain life, others in the household may not be (T5).

When settling in a new area, remote working makes the transition easier "rather than diving into the unknown, finding work again, etc." (T5). This is especially true if you can keep your Paris salary (T5), which gives you greater purchasing power (F1) in a provincial area, particularly when your partner has to give up their job to relocate. In the case of couples who both work remotely, this poses fewer problems. However, some remote workers, like T11 and T12, had a partially long-distance relationship. Therefore, although employment is not an issue, the arrival of a child changes the dynamics and requires decisions to be taken on where to settle: "She was working in England, she was also a consultant. When our son was born, we discussed it a lot, and decided to stay here" (T12).

This agreement seems all the more important in cases where the remote worker's partner does not have the option or desire to work from home. Although it appears that the region, particularly Queyras, is an "important employment area" (R3), "qualified jobs in the departement are rare" (R8). Faced with a lack of vacancies (T1) in certain fields (T1) such as digital communication (T7) or architecture (T6), some were obliged to change jobs: "for work, she had to change jobs" (T5). This new work could be running a bed and breakfast (T5) or seasonal work (T8), in line with the local economy, which is strongly tourist-based and varies from season to season (R17).

4.2.5 Remote workers' past experiences

Remote workers do not "come and buy right away; first, they will come for a trial run" (R3). This trial run could consist of simply having grown up in the area; or they may come on vacation (T14) or to camps (T1); they may try out the area in a professional capacity, such as internships in companies (T6) or professional contracts: "I was working in waste management in the Com-Com" (T2).

When those who have tested the area before settling down talk about why they stayed, they speak with passion: "love at first sight" (T2), going beyond the simple image of skiing in the mountains: "I came for the winter season in the mountains, but I stayed for the summer season in the mountains" (T8).

Trialling the area means they aren't jumping into the unknown and moving to somewhere where they don't know anyone (T1). Remote workers may have childhood friends (T4) or friends (H1) in the area, get to know locals (T14) or make acquaintances with local officials and stakeholders. It also allows them to *"familiarise themselves with the area"* (T1) and to learn about local customs (F2) and reality: *"People don't realize that during the off-season, there is nothing"* (T5); the roads (R9) can be dangerous in certain areas, especially the Queyras (R8); and the lack of public transportation (H1) as well as the challenging winter conditions (T6).

What everyone emphasizes during interviews and meetings (even those who haven't faced this issue) is that to try out living in the area, there is a need for housing (R15), and it can be quite complicated (R18). Although several solutions (R15) are being implemented by local authorities, a special third place could be a solution for remote workers: a coliving/coworking space that attracts digital nomads but also allows remote workers to try out the area. In a meeting, the manager tells us, *"we have couples who want to buy here; they come here to try it out"* (R15). This type of third place could be a large, shared house or an Airbnb for remote workers, allowing them to *"work together and live together"* (R15).

4.2.6 Life path: a factor facilitating mobility

Our interviews, discussions and participant observations have taught us that remote workers who have chosen to work remotely from mountainous areas often have prior experience of remote work – whether it be hybrid work or working from home during lockdown periods – and for the majority of them, this lifestyle choice was not random. Some even mentioned that it became a criterion for job selection: *"Now when I look at job offers, I search for 100% remote work"* (T3). This choice seems to result from a consideration of the fact that remote working is now possible and even easy. Whether through their studies or previous employment experiences, remote workers currently residing in mountainous areas had already benefited from a certain level of confidence (T2) in embarking on remote work because it was not their first time in such a work arrangement. For the majority, however, the proportion of remote work has significantly increased since they started working from a mountainous area. These initial findings suggest that past remote work experiences the ability to envision a remote working lifestyle in the mountains: *"It opened the door to remote work for me because I already had prior experience"* (T1). The past work experiences of remote workers do not seem to be the sole factor facilitating the transition to remote working in mountainous areas. Indeed, some of them think their past travel experiences, especially during their education (e.g., gap years or university exchanges), facilitate their ability to make the move to somewhere new and integrate because they have *"acquired the skill of being able to integrate in ways other than work"* (T1). According to them, if you have already had similar experiences (T1), you know how to adapt when you need to settle somewhere new again.

4.2.7 The importance of support services for remote workers

It appears that remote workers need forms of support and help to settle in new places, as revealed by T2 during meeting R6. Although none of the interviewed remote workers benefited from such support, it may be relevant to examine how it can influence individual decision-making processes. Firstly, support programs can be considered as *"entry points"* to the area (F3).

The various examined programs are initiated by different actors – sometimes public and sometimes private – offering different modalities. Regardless of their nature, support programs must have knowledge of their area (F2) and facilitate the orientation (F4) of remote workers towards an area (F1), part of an area, or a specific municipality (F2) that may suit them.

During the interviews, it became evident that such a mechanism can be involved at various stages of a remote worker's migration decision-making process. While some programs only seek to support remote workers who already have desire to move (F1), others engage in prospecting (F3) through communication via networks, emails, or on LinkedIn (F3). All these programs guide remote workers towards a specific area, as we have seen, but they act either as facilitators for their departure (F1) or for attracting them (F4) to the area. Their role often involves connecting (F3) remote workers with elected officials and other local stakeholders (participant observation), catering to their need for information (F2).

One of these programs, for instance, allows remote workers to test the area by hosting them for three days, enabling them to explore the locality and meet with elected officials, local actors, and real estate professionals (participant observation). This experience allows remote workers, especially those with entrepreneurial projects, to immerse themselves in the local community and envision their future as residents and business owners (participant observation). In areas with particularly competitive real estate markets, such a program can be a miracle-worker (F2) for remote workers in finding suitable locations for housing or professional purposes (F2). Third places can also play a supportive role in assisting remote workers, specifically in the case of the self-employed, as they not only provide a place to work and generate income, but also act as providers of new professional spaces, facilitating the establishment of economic activities in a particular area.

4.2.8 Barriers and opportunities

This section will highlight all the barriers and opportunities for remote work in the Alps. The study showed that remote work can facilitate the development of mountain areas, though there are certain barriers to be overcome.

A region under pressure

The *Pays du Briançonnais, Ecrins et Guillestrois-Queyras* is a mountain region that has undergone economic transformation in recent years. Indeed, its economy used to be based on agriculture, then tourism, and the area is now trying to attract new residents who can work remotely. This has meant that the local municipalities have seen an increase in demand for jobs, for housing, and so on. These changes can be a barrier for remote workers migrating to the area: firstly, this once-rural area contains a lot of old houses not fit to be rented and sometimes impossible to renovate due to legal restrictions, as a member of the Regional and Rural Coordination Center (PETR) explained: *“You have to adapt things, but real estate today is becoming very complicated . When you see those who want to sell in the ‘Cité Vauban’, with the new planning requirements being issued, it’s going to be complicated... you won’t be able to rent out your apartment. The problem is that we’re going to end up with empty apartments and people who won’t be doing any work on the interior, because they haven’t thought about the old part of town. Because you’re not allowed to do anything, you can’t insulate from the outside in the old town”* (R17). Also, there are not many houses available. That is why one business owner said, *“I have a trainee starting soon and she’s here for 6 months; it wasn’t easy to find her a place to live”* (T2). Obviously, according to the logic of supply and demand, the lack of housing has led to a significant increase in prices: *“there’s not much on the market today, so it’s expensive”* (R8). Whilst this problem with housing is seen throughout the area, some municipalities are worst affected than others, and this should be taken into account in future decisions: *“What I mean is that the situation in Briançon is probably not the same as in Névéche”* (R10).

Climate change

The data collected highlighted the difficulties the region has encountered in raising its profile. People who come to the Alps often come for winter vacations. The area covered by this research is therefore often associated with the term ‘snow’, which can penalize efforts to promote itself for other times of the year: for example, *“summer in the mountains is not very well known”* (H1) compared to winter. Given the effects of climate change, it’s important that the areas studied succeed in promoting themselves all year round if they are to remain/become attractive, because let’s not forget: *“global warming may be an attractive asset, but if there’s no more snow, it’s a negative one”* (R8).

Lack of coworking spaces

The area studied is mostly made up of small villages. During one of the interviews, someone said, *“I think this lack of social connections scares a lot of people; people who live in big cities with the opportunity to work remotely, they’re going to think, ‘yeah but in Briançon, am I going to find coworking spaces, meet people, find opportunities for exchange?’ I think this is a huge obstacle”* (R10). Indeed, *“It’s not easy to find a CS*

here,” confessed one remote worker during another meeting (R13). And when they do find one, they are either full or unattractive, as one remote worker explained : *“Before I moved here, I said to myself, I’m going to move to the mountains, but not to a big city, so I’m going to look at Chambéry. There was a coworking space that I thought looked really nice, which is what I thought I’d find here, but in the end it’s not quite the same”* (R11). It would seem, then, that coworking spaces help remote workers to integrate in a new place, but that the area under study is either lacking in spaces or those that it offers are unappealing. The problem is that there are few places currently available in which to create new spaces in response to this demand, as someone rightly pointed out at a meeting: *“The places we have in Briançon are not suitable for coworking”* (R16).

Connectivity issues

Despite the efforts made and presented upstream to install fiber throughout the region, internet access is still limited, as one resident in Europe’s highest village explains: *“Fiber has reached Saint-Véran, but it’s not yet available”* (R9). This uneven rollout among municipalities sometimes leads to varying degrees of Internet connection problems. And sometimes, even when fiber is installed, connection problems persist, as this remote worker explains : *“there are minor problems, I don’t know if it’s linked to the building installation, and I’m not the only one to say so. I like to ask my customers for feedback on arrival, and sometimes they say that if there was one thing, it’s the Internet connection, because we do a lot of work with video”* (R12). Connectivity therefore remains an issue where the region must improve if it wishes to offer an ideal working environment for remote workers, in all municipalities.

Mobility issues

At every interview and meeting, remote workers told us that they needed to be able to travel, but it seems that more needs to be done to meet their expectations in this area. What emerged, for example, was that it’s difficult for remote workers to get to the city when they want to: *“we also have the problem of mobility, getting around easily without it being a problem ; without that, making space available would be useless. Remote working, we also need people to be able to go to work because, in my opinion, 100% remote working in certain sectors is complicated, we need national mobility”* (R17). On the contrary, some remote workers who don’t have a car, or who want to use their vehicle as little as possible, think that *“in terms of mobility, we have just about everything except local mobility”* (R15). In any case, everyone agrees that mobility is even more complicated in high season. In winter, because of tourists and weather, *“the worst is in Saint-Véran because, with the snow, we’re worried”* (R8). Summer mobility is also problematic: *“there are tourists too, and traffic jams in Savines and Embrun. I know when I shouldn’t go”* (T2). It should also be noted that trains are not available throughout the region (there are no trains in Queyras, for example)

and they don't stop at every village as the manager of Lucéo's explained : *"We don't have a local station; we have a main road, but it's true that for some people, that can be a problem. Because the nearest station is in Argentière, and we're between the two, so sometimes that can get in the way too"* (H3). And even when there are trains, they're often late: *"It was five and a half hours late on Friday"* (R12). In addition to the fact that the train provides a means of getting to the city, it also enables remote workers, who are sometimes without vehicles, to travel to the valley for leisure: *"many come without a car and traveling around the surrounding valleys is complicated"* (R12). To make up for the lack of trains, remote workers have to rely on the few buses, but unfortunately, this type of transport is not necessarily suited to all needs: *"we have buses, but I can't spend the night in one"* (R12). Finally, given the lack of local mobility alternatives, the distance between some houses and local services, such as shops, means that families need two cars (R8) to manage in the area.

Lack of services

On many occasions, the lack of local services has been highlighted. Remote workers tend to be young, as we said earlier, so they are also looking for a rich cultural offering: *"In the end, the cultural offering is inferior to Montpellier, but it's not bad"* (T13). This same type of remote worker would also like to see more social events, as one of them confided to us in the answer to the question *"what kind of events are missing?"* (R11). It's true that for this type of individual, the existence of meeting places seems important: *"perhaps there's a lack of places for socializing, like bars or whatever. Guillestre is a bit out of the way, but in the Queyras there aren't many"* (R9).

The lack of cultural offerings, events and meeting places is compounded by the shortage of daily services. We were told that services are mainly in Briançon (the region's main town) and that, *"ok, everything's open in Briançon, but if you live elsewhere, you have to go down to Briançon"* (R16). School, transport and administrative services are also lacking, creating a feeling of abandonment among those who live in the smallest villages: *"there's a feeling of abandonment by public services and schools, which are very important for small towns like Guillestre"* (R9). Finally, whilst the region does have a hospital, it's in Briançon and for some, it's a long car journey to get there. So, if someone had *"serious health problems that require health care services in the immediate vicinity"* (T2), this would be a problem, because *"the local health service requires an emergency to take an x-ray, for simple checks you have to go to Briançon"* (T2). Locally it is complicated to get an appointment with a family doctor, a dentist or any specialist in the area: *"if you're new to the area and want a dentist, it's hard to find a place"* (R9).

Another point is that the 'Parisian' working hours that remote workers sometimes have to follow can prevent them from taking advantage of the local activities available, as one remote worker explains: *"I work remotely for a company in Paris and I have the hours of a Parisian in the mountains, i.e.*

from 9am to 7pm every day, and when it's a beautiful day, I sometimes think damn, I'd love to get out skiing, but then you manage not think about it, but it's a hard reality. I've even had to install a treadmill under the computer to exercise instead of going outside."

It is also apparent that the service offerings are seasonal. For a good part of the year, some villages see the local services further reduced: *"bars are closed throughout November"* (R9). In addition to being seasonal, the services offered are not adapted to young people. A family in which the parents want to work remotely from the region would find their teenage children suffer the consequences because *"a child born in the mountains isn't the same as a teenager brought in from the city with nothing to do"* (R8).

Let's not forget that the studied region has no industry, so remote workers who then want to move there or find local work once they've settled in could face real difficulties because there are *"no companies hiring"* (R2).

Need for facilities

From a landscape point of view, the remote workers we met would like to see more *"green spaces"* (H1) or *"parks"* (H1) for those who live in Briançon (the only town in the region). From a more practical point of view, the remote workers interviewed consider the state of the roads to be problematic, and the fact that they are not suitable for pedestrians to be dangerous: *"yes, because when you cross [the road], you're never sure that you'll get to the other side"* (R8); *"here, there is the added stress of the roads"* (R3); *"If we want to welcome families, the roads are not safe and you can't do anything on foot"* (R6).

Communication issues

In terms of communication, the remote workers we spoke to told us that they found it hard to find information on the various services offered by local authorities and/or the private sector in response to their needs. Sometimes, when we asked remote workers about the services available to them, we got a contradictory answer: *"there are several modes of transport, though I'm not quite sure yet"* (R11). This led us to ask, *"How is it possible that you don't know the bus timetable?"* We learned that the main obstacle is that this information is, in most cases, only available in French on the various media channels: *"finding the right bus is very complicated when you don't speak French and most of us are foreigners"* (R12).

Opportunities

Below, we present the opportunities that this new type of work offers for the area .

Attract new people

As we saw in the previous section on barriers, remote workers need coworking spaces to integrate in a new area. Based on our interviews and observations, we believe that creating new coworking spaces, diversifying existing coworking spaces and promoting them better would help attract remote workers to the region, as one coworking space host

told us: *“What’s new is that, before, it was mostly people we already knew who came, but now it’s also people we’ve never met. Sometimes they’re very focused on work, they don’t come to talk, so they come into the office they’ve booked and only come for the equipment. But we can’t measure today how much more visible we are than before. We’ve got a website that’s got an easy booking system, and maybe that’s why...”* (H3). What’s more, if we look a little further afield, we discover that people who come to the area to work remotely sometimes come back to settle permanently in a co-living/coworking space: *“we think there’s a potential snowball effect, people who came a few years ago, who said to themselves ‘ah, in the end, Briançon is not bad,’ and they said they were going to buy a place here because there’s this community, ... we know couples who met here, who buy a place here”* (R11). In this way, coworking spaces can even help to attract people who may later settle in the area in the longer-term.

No matter what, *“we need to understand and classify those who would be interested in coming here; and we’re talking about remote working but there are people who could live here year-round”* (R16). For example, we discovered that remote working is a way of attracting people who already own a second home in the area to come and live there more permanently: *“now there are families with children who come to work on their second home”* (R18). These are often *“people on high salaries who can come here to work remotely”* (R18), because these are people with high levels of qualifications. The interest in the region can then be two-fold, since these people, who have skills not usually found in the area, may be able to pass on or use their skills there. Indeed, as one person explained to us: *“it gives us access to new resources that we wouldn’t otherwise have”* (R7).

Another opportunity for mountain areas would be to take advantage of the development of remote working to offer additional services to tourists who come to the area: *“he skis in the morning, he can work in the afternoon, then he spends time with his children later”* (R2).

Finally, remote work is a way of attracting people who want to leave the city, especially since COVID-19 (R3) or who see living in a remote area as an advantage (R2). This can enable these areas to attract different profiles that are adapted to their needs (R14). This is true even if they don’t decide to live here all year-round, but rather to spend long periods of time here, as one interviewee explains: *“You can easily have an architect who has his business in Paris and who works and lives here; he doesn’t necessarily have a digital connection, he works intellectually here from time to time”* (R16).

Betting on communication

Many services, activities and support initiatives already exist in the region. To attract new remote workers, it would be a good idea for the areas concerned to communicate better on the subject as one of the people present at one of the regional meetings pointed out: *“[there is] a lack of information and*

communication on what already exists” (R17). First, remote workers often emphasized the importance of information on transport: *“when I come from Paris and I’m looking to get to Briançon, it’s good to have information”* (R14). There is also a strong lack of information about existing coworking spaces in the area under study: *“There are spaces like Altipolis (a coworking space), but even the locals don’t know it exists”* (R18). A priori, the associative offer struggles to make itself known: *“there’s a whole associative life in Briançon, but there isn’t enough readily available information on the things on offer”* (R11). The same goes for integration services such as the free French courses, which exist but are little poorly advertised, and if remote workers *“want to settle more easily in France, it’s important”* (R11).

In addition to local services, some people have pointed out that, generally speaking, there are also a number of non-local services that could convince remote workers to move here, as they already facilitate the daily lives of thousands of people living in landlocked areas like the one studied. Examples mentioned include Blablacar (R15) a car-sharing site, *“professional training via distance-learning”* that *“simplifies things for local people”* (R8), online administrative services, which now mean that *“95% of problems can be solved over the phone, even the big stuff”* (R3), home delivery, which enables *“people who come from the city [to order a] book on Amazon, [and get] it in a day or two. It’s reassuring”* (R9) or even telemedicine, because *“digital technology makes it possible, and being able to work in a network of specialists and general practitioners is a bonus”* (R9).

A final priority is to enhance communication on remote working as a whole; to advertise the area as a welcoming place in which there are already local remote working communities because *“even if there’s [only] a tiny bit of communication on the right channels that there’s a small community in Briançon, [and] small events take place and are visible”* (H1), this will help attract more remote workers according to one manager of coworking/co-living space.

Creating new services

The creation of coworking spaces would help attract and retain remote workers in mountain areas. Remote workers need quiet, connected spaces in which to work and socialize: *“post COVID-19, we’ve seen a lot of people who’ve moved here, who work remotely, but the problem is that with a family, remote working from home is complicated, so CS or nomadic offices can be a solution”* (R17). Also, the coworking spaces already found in these areas are sometimes different from those that are found in big cities, which can be an obstacle to development (R11) where the social side is missing (R11). So perhaps existing or new spaces could create new offerings more in line with the needs of the remote workers identified. It also seems important to ensure that the various municipalities have enough stores so that remote workers who don’t want to travel much don’t have to. This research revealed that businesses in this type of tourist valley are often grouped together in the main towns, and close in the off-sea-

son due to lack of customers: *“the problem is that services aren’t available all year round and, apart from Briançon and Le Môtetier, it’s impossible to find things open when the season is over, everything food-related etc.”* (R17).

The lack of snow off season also affects the range of activities and leisure facilities available in these valleys. In this respect, one resident in one of the valleys studied told us that, in addition to ski lifts, he would also like a summer toboggan run (R18) and thinks that things need to be reinvented (R18), like Le Môtetier, which offers, in addition to a large ski resort, a spa as an alternative to skiing (R18). According to one person we spoke to, it would even be interesting to offer *“packages where we provide a room, internet connection”* (R17) so that people can *“work [in the morning] and in the afternoon, go skiing”* (R17).

The local authorities are also keen to improve transport services to retain and attract remote workers. For them, it’s important, for example, that the night train, which enables remote workers to get back to Paris easily and cheaply, is maintained, as one of them explains: *“If there were an offer to go to Paris, a real night train like there used to be with couchette cars where you depart [in the evening] and the next day, you’re practically ready to go to a meeting, it would start to look better”* (R9).

According to the local authorities, another opportunity would be to *“open up some of the tourist beds to accommodate people who want to work in the area, not permanently, but to open up second home beds for them, because we can’t build anymore, so these beds need to be occupied off-season”* (R12).

Even if most of the remote workers we met felt that their Internet connection was sufficient, some people still felt that a better Internet connection would be a strong factor of attraction: *“I’m a computer specialist, and I received a phone call from a real estate agency for a customer who wanted to buy a property in Mont-dauphin, and he didn’t want to make the sale because there was no ADSL. Before, it was all about proximity to schools, shopping centers, day-care centers... Now, digital is a criterion”* (R19).

“Having a little digital training center here for young people from Briançon would help keep them connected” (R12). It seems that a wide range of training courses tailored to the needs of remote workers would be useful.

Finally, a virtuous circle is possible: by attracting new people, services such as schools, stores, etc. can be maintained. But to attract them, there must be a good level of service. So, it’s a question of taking a long-term view by encouraging stores and other services to stay open, to continue to attract and retain new remote workers.

New legislation

On several occasions, the people we met expressed their desire for local authorities to regulate the property market to limit the number of second homes. However, while taxing second homes seems to be a solution, some feel that *“if you increase property taxes, when people are paying millions for houses, property taxes don’t amount to much”* (R19), that’s why some go even further, saying that *“second homes should be requisitioned”* (R14). Another solution would appear to be the implementation of a housing renovation policy. Indeed, in the studied area, there seems to be a great deal of untapped potential in empty buildings. However, these unoccupied buildings are often unfit for rental. Local authorities therefore need to engage more in actions aimed at encouraging renovation, as is already the case in some places, even if this implies a certain financial commitment: *“We’re in the process of setting up a housing renovation program, and we’ve tried to raise the awareness of elected representatives, because when we do a takeover bid, we can help and contribute to the operation, we have ANA (Agency National de l’Habitat) aid, and the local authorities can help too, but they’re very nervous about it. Today, local authority finances are complicated; in fact, there has been a transfer of responsibility from the State and it’s complicated to mobilize funds, even though we know that this is the future and that if we don’t, the areas will be empty”* (R19). In this respect, as some have pointed out, perhaps public-private mutualization (R6) would be beneficial.

5. The study in Austria

In the following pages we present the research carried out in Austria.

The presentation is divided in the following sections:

- data collection and analysis
- results.

5.1 Data collection and analysis

During the preparation phase of the international survey, it became clear rather quickly that additional data from local people in the region were necessary in order to develop a consistent picture. In view of the solution design phase (ac-

tion 1.3) in particular, region specific challenges as well as opportunities need to be clear. Therefore, we conducted several interviews as well as a small survey.

The interviews were conducted by a team of three students whose project focused primarily on Coworking and Community Spaces. During their project, they worked closely with the Austrian Partners of AlpSatellites and contributed to the project's research and data gathering process.

In total, 11 interviews with people from different age groups, gender, occupation and different municipalities in Vorarlberg were completed. All participants were asked the same questions in order to create a comprehensive picture of the region. The interviews were held in person, and the interviewer wrote down the responses of the participants.

Topics covered during the interview/Interview guide

1. How do you currently perceive life in the community? (Social cohesion, contacts within the community, etc.)
2. Would you like to see a more active community life?
 - a. If yes --> How would you make community life more active?
 - b. If no --> Why do you want to keep everything as it is?
3. How familiar are you with digital topics? (installing apps, handling official matters digitally, etc.)
4. How would a digital service in the community look like to you?
 - a. For example: Learning sessions over coffee, Chatroom
5. Depending on previous questions: Would you be willing to participate in this service (as a helper/advisor)?
 - a. For example, once or twice a week?
6. Would you use and take advantage of a digital (training) service provided by the community?
 - a. If no, why?
7. Would you prefer fixed or flexible appointments?
 - a. Fixed
 - i. How often? (1–2 times per week)
 - ii. Time of day (afternoon, evening?)
 - iii. Weekdays or weekends?
 - a. Flexible
 - i. Via telephone, email, booking tool
 - i. How do you imagine the availability of the individuals?
 1. Immediately available?
 2. Appointments within a day?
 3. Other.
 - a. Where would you prefer the appointments to take place?
 - i. For example, at home,
 - i. Is it okay if it's in a different community?
 - i. In the village centre
8. Are there any other points you would like to address regarding this matter?
9. Additional possible inquiries
 - a. What devices do you use and how do you use them? (Programming, everyday tasks, etc.)

As can be seen in the interview guide, the questions focused strongly on how the citizens experience the community life and services in their municipality. During the course of the project, it became apparent that many regions/municipalities in Vorarlberg often lack what is known as social capital. Social capital refers to the networks of relationships and the associated norms of reciprocity, trust, and cooperation that exist within a community or a society. It represents the value that can be derived from social interactions and connections. In simpler terms, social capital is the advantage that individuals or groups gain from having strong social ties and a supportive social network. In Vorarlberg, decline over the years has reduced social capital, such as the closing of restaurants and cafés that were no longer economically viable, the digitalisation of, for example, local bureaucracy or the decline of the church. A certain amount of social capital was retained through the strong and widespread club culture in Vorarlberg, however only within the sphere of the clubs themselves. In sports and music or the fire brigade clubs, people meet regularly, organize events and help and support the community in different ways. These people in general have a stronger sense of community and feel more connected to the municipality of their residence or club. The problem with these clubs, however, is that people have to fully commit themselves to be part of the club; they have to attend meetings regularly and above all have to be proficient or very interested in the specific topic of the club. Not every local resident, however, is good at sports or music or wants to be in the fire brigade. These people who are not part of the clubs often lose their sense of community and their feeling of belonging to the municipality.

Rebuilding social capital is a difficult but necessary task. Not only for people to reconnect to the municipality and revive their social participation and affiliation but also for remote work and coworking space to be able to succeed in the region. A coworking space does not only exist within its own four walls, but also has huge effects on the local community, including the social system, points of interest, transportation system, economy and environment (Hölzel et al., 2022; Mariotti et al., 2021). The people working in the coworking space also contribute significantly to the changes taking place. Digital nomads, for example, are complete strangers who move somewhere where they build a new life and work in a coworking space. In this new environment, they also take part in the social life of the local community, therefore impacting the existing social system. Remote workers who are from the region who use the coworking space also impact the existing ecosystem; by working in the coworking space they change their regular schedule (for example driving to work in the morning and returning in the evening). Very often they start to follow new work patterns and develop a new daily routine, which affects everything around them. Hence, the development of a coworking space and the incoming migration of digital nomads has major effects on existing ecosystems. Only if the ecosystem is open to change and eager to adapt to new circumstances, a coworking space and remote work

can succeed and even thrive.

Social capital can be used as an indicator of a community's openness and adaptability. We therefore extended our research to determine the level of social capital in the target region. We expect higher acceptance of a coworking space and remote work if social capital in the region is also high. This assumption is based on the following factors.

A community has a strong social capital when the sense of belonging and mutual support among its members is high (Portes, 1998). This in return fosters an environment where initiatives like coworking spaces are embraced and actively supported. A region with strong social capital is more likely to have individuals willing to volunteer their time and skills to contribute to innovative projects in the municipality. This volunteerism is essential for the success and sustainability of different initiatives such as coworking or community spaces. Additionally, a community with strong networks and relationships provides a fertile ground for collaboration, knowledge-sharing and partnerships among local residents, remote workers, digital nomads, businesses and organizations, which are also vital for a coworking space. Other important characteristics of a community with high social capital are trust and reciprocity (Portes, 1998). Drivers for trust in this context are often extensive engagement in volunteering, political group membership and different forms of community action (OECD, 2018). Establishing trust is crucial in gaining the confidence and support of local residents for the development of a coworking space. Furthermore, a region with established social capital is more likely to have a culture of community engagement and cooperation (Portes, 1998). This cultural alignment creates a natural fit for initiatives like coworking spaces within the local context. Through social capital, there is a greater understanding of the specific needs, preferences, and challenges of the local community. This knowledge is invaluable in tailoring the offerings of a coworking space to meet those needs effectively. Moreover, regions with high social capital tend to be more resilient and adaptable to change (Aldrich & Meyer, 2015). This is important for the long-term sustainability of a coworking space, especially in the face of evolving community dynamics.

5.2 Results - Interviews

The interviews focused on people's personal experiences of community life and support systems in the region. The idea behind these questions was to determine the current level of social capital and to gather ideas and suggestions on how to increase social capital. This resulted in some interesting, and often highly varied insights.

The general response to the first question on how people currently perceive community life was positive. Older as well as younger participants think that the community is fine or even very good. The reasons why people think the community is good however differs drastically. Some interviewees

stated that they live in a very loving and caring community where people get help if they need it. These were often the people who also said that they are happy with the current activities and services available in their municipality overall. Some of the respondents also pointed out that they are happy with the community life as it is because they value their peace and quiet and don't need more things in life to be happy. These people also reported that they don't really participate in existing activities, parties or events in the municipality and therefore also don't need to see more of them. One of these interviewees, however, mentioned that even though they are satisfied, they think that there are not enough activities for the younger generation. Another younger interviewee reported the same thing, explaining that there are many activities for kids, families, and older people, but only a few activities for young people between the age of 15 and 20. Another point that many participants agreed on was that the constant incoming migration of people to the municipality actually weakens the community. This is an interesting observation, showing that simply increasing the population doesn't automatically restore social capital. This shows us that specific measures need to be taken to restore the sense of community, social cohesion and local support. Interestingly, although most participants are fairly content with the current situation, many still propose improvements that would benefit others.

5.2.1 Suggestions for change

- **Intensified marketing**

Events such as sports events should be promoted better so that everyone knows about them. Interviewees criticized the fact that only club members are informed about all the events the club organises, which in some way excludes all other local residents. This fact also highlights the fact that, as mentioned above, social capital remains within the spheres of the different clubs.

- **Social gatherings for young and old**

One of the most frequently mentioned suggestions for improvement was the creation of social gatherings for young and old. Many interviewees pointed out that even though there is a good community and enjoyable events in the municipality, there is a lack of communication especially between different age groups. Events are often designed for a very specific social group, which divides the community. Interviewees agreed that they would appreciate events or gatherings or any type of activity that fosters the encounter between young and old. They also see many benefits to such a development, such as active problem solving, increased communication and a strengthened sense of community.

- **More restaurants (also for the clubs)**

In the past, nearly all municipalities in Vorarlberg had their own restaurants and bars, mostly traditional with typical

Austrian food. These were places where the community came together to talk, eat, have fun and even do deals and talk politics. What are known as Stammtische (tables reserved for regulars) were commonly found in inns or taverns, where locals met and played cards. However, in the last few years, more and more of these restaurants have disappeared, leaving empty spaces and no places for regular meetups. Many local residents would like to see more restaurants like these open again; they consider them to be special meeting places, where anyone can go without the need for membership, particular skills or specific times or days. Everyone is always welcome in a restaurant and can just pop by to have a quick chat with other people.

- **Events**

Besides regular places to meet, the interviewees would like the municipality and the local clubs to organize more events. Very traditional festivals and celebrations are common, but these only happen a few times a year. Some of the interviewees pointed out that only a few dates per year, which mostly fall into the summer season, are not enough. One participant also mentioned that some events, such as the local Christmas market and the summer party, have been well-attended events. Unfortunately, these events are no longer held. This interviewee suspects that organising the events had been too much of an effort and that there were not enough volunteers to help before, during and after.

The lack of volunteers is a problem that we observe not only during the interviews but also by talking to the AlpSatellites project partners in Doren and even from personal experience. The municipality Doren owns a pleasant, cosy space that can be used for events, or meetings and in the future might also be used for coworking and technical support. One of the biggest challenges in broadening the service offer, however, lies in finding the necessary volunteers and helpers.

- **Youth centre and infrastructure for young people**

Another problem that was often mentioned is the absence of places for young people. Some larger towns, as well as all the cities in the region, have different places where young people can meet. There are rooms with facilities, such as a table football, a billiard table and a small kitchen, etc. Often, these spaces are also close to a skatepark or a basketball court, giving the young plenty of things to do, especially with their friends. Many of these centres are also connected to a youth support organization with their own youth worker. This type of infrastructure however does not exist in more rural areas, leaving young people without many places to go. Some of the interviewees pointed out that the municipality lacks activities for people from the age of 15 to 20 and that in planning new activities and events, special focus should be placed on the younger generation. Interesting thereby was also the

fact that many interviewees that suggested this change are not directly affected by the lack of places for young people but are concerned for their well-being.

- **Stores (grocery stores, post office, etc.)**

Different types of stores have been mentioned as a very positive factor in every municipality. It gives the local residents more freedom and flexibility and the option of doing their shopping locally. People also mentioned that in the local stores, they often meet other locals, which encourages social interaction.

- **Meeting spaces**

Similar to the desire for more restaurants, many interviewees also emphasised that there are no 'spaces' for get-togethers. Older participants in particular mentioned that the church had always been a place where people could meet. People did not only go to church for religious reasons but also for social reasons. The participants pointed out that the municipality needs to provide some type of space where people can meet freely.

- **Public transport**

Two interviewees also brought our attention to public transport and suggested improvements to the current infrastructure and services. For them, mobility plays a huge role in staying connected with other people, especially in rural areas. When people don't have access to a car, public transport plays an essential role in being able to visit friends, go to the town centre, attend events, etc. This affects especially young people who can't drive yet or don't own a car, but also old people who can't or don't want to use a car anymore.

- **Activities organised by the municipality**

As mentioned before, many activities that take place in the region are organised by local clubs. This often excludes the participation of non-members. In order to solve this problem, some of the interviewees suggested that more activities should be organised by the municipality. Furthermore, the activities should cover a broader range of interests, such as cooking classes, class reunions or special charity events. One person mentioned that, of course, it is not easy to find activities that suit all interests and all age groups, however some things are more universal. For example, an afternoon where grandmothers teach younger generations how to bake a good cake would certainly be interesting and fun for many people. These special activities could also be used to bring young and old together in a fun, informal and easy way.

- **Trial days for different activities**

Besides big changes to infrastructure and services, one interviewee suggested a very small change that would make integrating people easier. By offering trial days for different activities, local residents get the chance to try

something new without being forced to sign up for it.

5.2.2 Technical skills

Besides the strong focus on social capital, the interviews also sought to assess the current general level of technological expertise, and how the participants use digital technology. This was an important part of the interviews, since it helps to determine whether a coworking space or some type of remote work is likely to succeed. In many parts of Vorarlberg, there are still a lot of traditional crafts, along with forestry and farming or tourism; the rural economy in particular relies on these sources of income. By determining people's level of experience, we get insights into their daily usage of technology; we see if people need technology for their work or their private lives and how familiar they already are with digitalisation.

The answers to the question on how familiar people are with digital topics were very diverse. Some people are very familiar and use computers, smartphones and a variety of programs a lot. Other interviewees however, never or only scarcely use technological devices and say that they don't really know a lot about digitalisation. As expected, the differences in knowledge are mostly connected to the age of the participants. The younger the person the better the digital skills and also the greater the daily usage of technology. Older people often stated that they don't really know a lot about technology, but also don't really see the benefit of it. According to them, most of the activities they do during the day do not really require digital skills. It is interesting, however, to look at what people view as digital skills: some interviewees explained that they basically do not have any digital skills or knowledge about technology, but these people also mentioned that they use their smartphones daily and use Microsoft Office programs, among others, at work. They know how to use these tools in order to communicate and manage their work, but they still describe themselves as amateurs in the field of technology. Middle-aged people in particular are aware of the vast progress in technology in the last fifty years, which might be why they see themselves as digital amateurs.

5.2.3 Willingness to volunteer

There is a lot of work associated with setting up and running coworking and community spaces and this requires people willing to participate in the project, develop the space, and devote time to it and help out where they can. Finding these people can often be quite difficult, however there are different approaches to dealing with this challenge: one option is to employ people who get paid a fair salary; another is to find enough volunteers who are willing to help. Finding volunteers, especially in areas where social capital is not that strong, can be a significant issue. During the interview, the participants were therefore asked if they would be willing to volunteer in the municipality, and the responses varied. Some people immediately agreed to helping out and spend-

ing their free time helping others. Other participants, however, said the complete opposite, arguing that they either don't really have the time because they work a lot or that they simply do not want to help because they are not interested in getting involved in the community and because they value their peace and quiet. These were also people who are generally not interested in local activities and don't attend any events. Some people also explained that they can not really help, not for lack of willingness but because they lack the necessary skills for it, especially if it involves digital support.

5.3 Results - Survey

For the Bregenzerwald region, it is of crucial importance to learn more about the demand among local residents. The big cross-border survey carried out by the three countries Italy, France and Austria gives interesting insights; however, there were no questions about social capital and digital skills. Therefore, we carried out a smaller survey within the region with around 50 participants. The main questions where:

- If there were a support service, would you use it?
- How do you imagine a local support service?
- Are you willing to volunteer?
- What opportunities do you see in such a support service?
- What risks do you see in such a support service?

On average the people who answered the survey were 29 years old with the youngest participant being 18 and the oldest 56. When asked if they were interested in a possible support service, the general notion was between a 'probably yes' and 'maybe'. Since the average age is not that high, it doesn't come as a surprise that a digital support service is not the biggest priority. However, we should also mention that, despite the young age, a fairly large proportion of people answered that they would probably or very likely use a support service. This shows that even younger and middle-aged people sometimes do not have the necessary skills to manage modern technology without help. The most interesting question was how they imagined a support service would be. Contrary to our expectations, people came up with all kinds of ideas and suggestions, even those who were not interested in using the service for themselves. In order to present the ideas clearly, they have been categorized according to their characteristics.

5.3.1 Characteristics

- **Form**
Many participants suggested some kind of digital service where people could ask for help or find the necessary information for their problem online. Numerous others mentioned the need for a personal non-digital service where citizens can get peer-to-peer support. Besides digital and personal support, participants also suggested that

solutions for problems should be made available in written form, which then can be either read online through a website or disseminated through regular newsletters. One participant also came up with the idea of setting up a phone service, with experts available to provide solutions via a voice call.

- **Timing & availability**
Another factor that was particularly important to the participants of the survey was the availability of the service. Many suggested a 24/7 service or at least a service that is also available out-of-hours. Besides the service being readily available, people also pointed out that the service should be in real time, meaning that it deals with problems when they occur and not days later.
- **Space**
Especially when support is given in person, it requires a space in which to meet. Some participants suggested that the municipality should set up a place where people can meet and discuss different topics. Some also mentioned that a space in a café would be a nice way to meet people and talk about technical problems. Many participants also proposed simply integrating the technical support service in the current infrastructure. Several municipalities have ReparaturCafés (regular repair services offered by volunteers at a workshop), regular card/board game afternoons, learning cafés or language meetups which could also integrate a support service, and this would avoid the need for a new space and broaden the offering of existing services.
- **Event**
Besides the several suggestions for a digital or in-person support service, numerous participants suggested providing support for different types of activities, such as regular meetings, workshops, or courses on specific topics.
- **Usability**
One word that was used repeatedly throughout the survey was 'easy'. Nearly every participant mentioned that the service has to be easy, possibly even fun and intuitive to use.

After asking for ideas, the participants were also asked if they would be willing to help manage a hypothetical local digital support service. The majority of people answered with 'probably yes', demonstrating the willingness to help others. However, we need to take into account the fact that saying yes in response to a questionnaire is easier than actually doing it in real life. Nevertheless, there is a general positive view towards helping others in the community.

The two final survey responses required participants to describe briefly the opportunities and risks people perceive in a technical support service.

5.3.2 Opportunities

Many participants think that the sense of community would be strengthened in different ways, including the opportunity to include newcomers and less well-integrated local residents in village life, communicate better with others and get to know new people. Surprisingly, many participants of the survey also think that a support service would be a social bonding opportunity for both younger and older generations. The support service is seen as a bridging tool between different ages as well as ethnic groups and interests. Overall, people think that a support service would facilitate communication within the municipality, leading to improved procedures (e.g. at administrative level) and better communication flows. Examples of better communication flows included the fact that information can be made available in digital form and not just via physical publication on the town/village hall notice board, which reaches a wider community; news can be communicated faster and more directly via digital channels and communication between local government and residents is no longer restricted to office opening hours. Many see huge opportunities of increased flexibility, transparency, and attractiveness for the municipality. The participants pointed out that a lot of the benefits that digital transformation brings to the economy will also be manifested locally. Surprisingly, the fact that people can seek help and solve problems online was mentioned only a few times. Most participants see more value in interpersonal benefits than the actual solving of problems. Other positive side effects mentioned were increased sustainability since people do not need to travel or print out information. The time and cost savings of digitalisation in local administration would also free up employees to devote themselves to other tasks. The development of a support service is also seen as an opportunity for the whole community to improve their skills and learn from each other, making the whole community more adaptable to change (especially digitalisation). Of course, people also mentioned that a support service would make life easier.

5.3.3 Risks

Creating and launching a new public service always brings with it some risks. The participants of the survey also identified a few challenges in relation to a digital support service. One thing many of them did was to compare the support service with existing social media platforms, the fear being that similar online discussions and problems could arise. One person mentioned that, for example, neighbours could bring their neighbourhood disputes to online forums. Digitalising services and other activities also has huge effects on data security and privacy rights, since everything has to be GDPR compliant. However, one of the biggest risks mentioned is that the exact opposite of what the support service should achieve could occur: many participants predict that people, and especially older citizens, will not get the necessary help because the service is too complicated and will exclude those who are not digitally proficient. Furthermore, people could even communicate less, and personal contact could disappear even more. Transitioning everything into an online space can cause social exclusion and isolation; if all services are available online, there is no reason left to go to village/town hall and meet with real people and engage in real conversation. Another surprising concern expressed by numerous respondents was that the support service could make room for fraud. The fear is that, again especially old people, could fall victim to all different kinds of scams. Besides these social concerns, people also see the whole transitioning process as a difficult, time consuming and costly task. First, there might not be the necessary digital infrastructure and creating it from scratch is an expensive and lengthy process. Another huge factor is that, currently, few administrative processes, documents and activities are fully digitalised, which means that this would have to be dealt with first.

6. Conclusions

The research presented in the previous pages has allowed us to gather numerous insights for the development of remote work and the creation of coworking spaces that enhance local culture and the specificities of the three areas under examination. We have examined and presented micro and macro aspects of the phenomenon of remote work, which serve to highlight its complexity. The research has shown that remote work involves psychological, social, cultural, geographical, and legislative aspects come into play, which must be taken into consideration if we want to develop this new form of employment and spaces for work within the context of the Alps.

In these conclusions, we take a broader look and offer a cross-sectional analysis of the data summarizing the elements useful for action and intervention in support of remote work and the design of coworking spaces. These elements will be used in the subsequent actions (A.1.3 and A.1.4) of AlpSatellites. This research has revealed that coworking spaces are important and their construction and maintenance can be facilitated by various factors contributing to their success. Specifically, this section presents some of these key factors, which emerged from the interviews in which participants described their needs in terms of remote work and coworking spaces, and the resulting essential characteristics required. We also highlight the potential barriers to attracting or retaining remote workers and offer recommendations for facilitating remote work and more specifically the use of coworking spaces.

6.1 Expected characteristics of coworking spaces: what motivates a person to frequent and work in a coworking space?

We cannot pinpoint a single factor that motivates an individual – be it a resident living in the Alps, a tourist, a second-home owner, a digital nomad, a seasonal workers etc. – to frequent a coworking space. Instead, we must envision a combination of elements, a juxtaposition of multiple aspects, that may, for instance, convince a resident to take a car or public transportation to reach a coworking space that may not even be as comfortable as sitting at home. Below, we summarize these aspects and emphasize once again that these elements must be envisioned and taken into account simultaneously in order to respond successfully to the needs of different potential customers of a coworking space. These aspects have to be taken into account, but at the same time they have to respond to specific needs of the target's areas.

Technology Infrastructure: Ensuring fast and reliable Internet connectivity is crucial. Additionally, it can be beneficial to equip the space with tools such as printers, scanners, and projectors. Alpine areas often have less than optimal network coverage, which can lead tourists and residents to seek

a secure space (a coworking space) where they are ensured a strong internet connection.

Architecture and Design: Well-thought-out design and functional architecture can create an attractive and comfortable environment, including the use of sustainable materials, maximum exposure to natural light, and adequate artificial lighting. The space should also be set in or close to natural surroundings, providing opportunities to work or take breaks in the open air: this aspect was particularly emphasized by many respondents.

Strategic Location: The choice of a convenient and accessible location is crucial. A location near public transportation can attract a greater number of coworking enthusiasts, and nearby parking would also be a factor in the success of the facility.

Diversity of Spaces: Offering a variety of spaces, including private offices, shared desks, soundproof meeting rooms (to avoid disturbing others) and relaxation areas, allows members to choose the work environment that best suits their needs. The need for diversity of spaces is particularly felt in the surveyed areas because it would enable forms of social interaction that counteract people's isolation during the low season. Additionally, respondents expressed a desire for spaces where they can create "corners" for storage or personalization. This results in a configuration of hybrid, flexible, fluid and versatile spaces.

Services and Amenities: Providing additional services such as cafeterias, break areas, reception services, and administrative support can enhance the appeal of the coworking space. Some interviewees also suggest that the coworking space can become a kind of hub that aggregates various services (for example, a mail collection point).

Community and Networking: Promoting interaction among members and creating networking opportunities can be an added value. Events, workshops, seminars, and common interest groups can help build a cohesive community. The coworking space should also be available for use by local associations.

Contractual Flexibility: Providing flexible rental options, such as short-term leases or monthly subscription plans, can attract a wide range of professionals, from self-employed to startups and even large companies.

Sustainability: Commitment to environmental sustainability is a strength indicated as a requirement by many respondents. Adopting eco-friendly practices such as recycling and the use of environmentally friendly materials attracts more environmentally conscious individuals.

Marketing and Promotion: A solid marketing strategy and

an effective online presence can help raise awareness of the coworking space and attract new members and tourists. The coworking space could become part of the tourist offerings.

Efficient Management: Professional and efficient management of the coworking space is essential to ensure smooth operations and the satisfaction of those who use the services offered. Additionally, consideration should be given to opening hours that accommodate the needs of workers who may have meetings with people living in other parts of the world.

6.2 Barriers to settlement

- **Housing Market** (not applicable to second homeowners) - The housing market poses challenges, particularly in terms of availability and affordability. The elevated cost of homes may deter potential new residents (Italy, France, and Austria).
- **Aging and Hard-to-Renovate Houses** - Old and hard-to-renovate houses can be a hindrance to settlement (France).
- **Connectivity Issues** - Connectivity challenges, including limited access to high-speed internet, can impact remote work and lifestyle in these regions (Italy and France).
- **Climate Change** - The effects of climate change, including global warming and reduced snowfall during winter, may affect the appeal of these areas (Italy and France).
- **Lack of Services and Facilities:** Limited access to essential services and facilities can deter settlement (Italy, France, and Austria).
- **Limited Cultural Offerings** - The absence of cultural attractions, activities and communal meeting spaces for social interaction can be a drawback for potential new residents. (France and Austria).
- **Inadequate Public Transport Network** - The absence of a comprehensive public transportation system can be a barrier to settlement (Italy and France).
- **Road Safety Concerns:** Poor road safety can discourage people from settling (France)
- **Labor Market** - The labor market is predominantly characterized by low-skilled jobs (Italy and France).
- **Rigid Employment Contracts** - Rigid employment contracts may present challenges for potential workers (Italy).

6.3 Facilitators of remote work and coworking spaces

To facilitate remote work and the use of coworking spaces, the following key factors have been identified through this study:

- **Improved Connectivity:** Investment in broadband infrastructure and expansion of high-speed internet coverage are essential.
- **Management by objectives:** Fostering a result-oriented attitude as a characteristic of organizational culture for new residents/residents who work for a company.
- **Affordable Housing Initiatives:** Encouraging affordable housing developments can make the target areas more attractive to potential settlers.
- **Community Building:** Fostering a sense of community and inclusivity can enhance social integration for new residents.
- **Promotion of Coworking Spaces:** Marketing and promoting coworking spaces as viable work options is a key factor in ensuring their uptake.
- **Specificity:** The coworking space must address particular needs unique to the area of its location and not only respond to the needs of tourists. Designing coworking spaces that are site-specific and leverage the resources of the specific context can enhance their relevance and effectiveness within the local area. By addressing the specific needs of the community, such as industry-specific demands, cultural preferences, and economic conditions, the coworking space can better support the growth and success of local businesses and professionals.
- **Creation of alliances between public and private organizations to finance coworking spaces:** Leveraging the skills, resources, and knowledge of both sectors to achieve better results than could be achieved independently.

In the end, addressing the barriers, capitalizing on the benefits and leveraging the facilitators of remote work and coworking spaces will be crucial to creating thriving, remote-work-friendly communities in our target areas. This would not only enhance the quality of life for current residents but also attract and retain a diverse and skilled workforce that contributes to the sustainable development of these regions.

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