Coworking: Evolution, Drivers and Spreading. A review for orienting suitable indicators for official statistics

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Abstract

This article provides an analysis of coworking as a new system of work organisation. Using a literature review, this article investigates the drivers that have led to the creation and development of this new work method in shared spaces. To this aim, the authors describe different workforce generations, their attitudes and behaviour in terms of work organisation. The study offers an overview of the current worldwide spreading of coworking with a specific focus on the Italian scenario.

Keywords: Coworking, Workspace, Work organisation, Community, Technological progress.

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1. Introduction

Coworking spaces appeared for the first time in 2005 in the United States and, since then, they have been continuously increasing, in both numbers and size. In 2017, there were approximately 13,800 coworking spaces worldwide (approximately 600 in Italy). These workplaces not only offer users shared workstations and services, but also serve as facilitators for networks and relationships, which are essential to address the current job market.

In particular, coworking is characterised by some specific aspects, among them: community, openness, accessibility and self-sustenance.

To understand better this organisational mode, it is necessary to consider the drivers that have played a key-role in the technologic, social and economic scenarios. Among them: the Industrial Revolution (from Industry 1.0 to Industry 4.0) and the features of different workforce generations. Additionally, it is worth noting that other issues, related to the technological progress and to the constant requirement of reducing business expenses, have encouraged new working modalities, such as 'teleworking', 'hot desking' and 'smart working'.

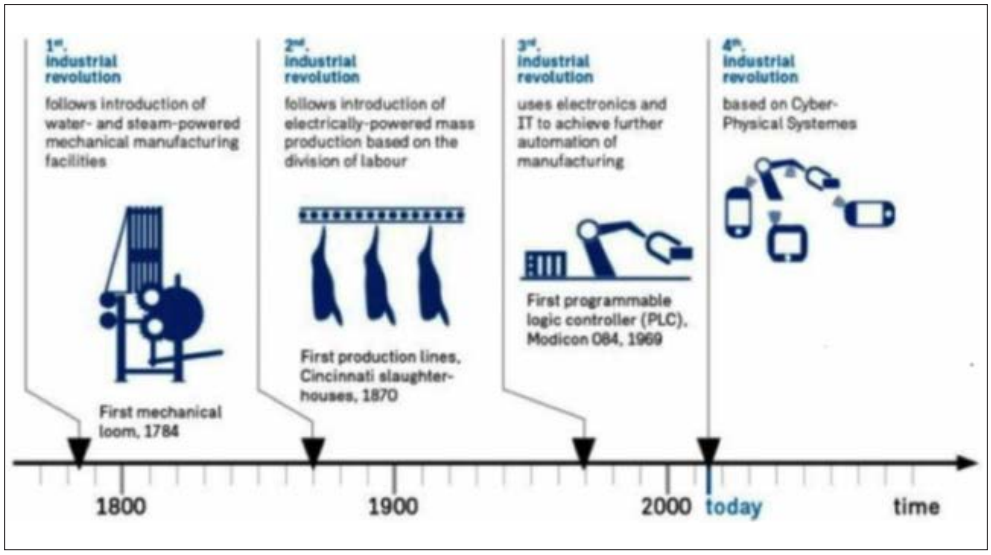
All these issues have led to an increasing demand of workspaces that could be more adequate for new work concepts. The following sections provide some significant examples of these workspaces; in particular, the spreading of coworking is considered both from a geographic and temporal point of view.

2. The drivers of change

In the last decades the world economy has been affected by significant changes, moving from a manufacturing economy to a digital economy mainly based on digital technologies (Figure 2.1) (Swann, 2017).

The First Industrial Revolution was characterised by the transition from hand production methods to machines, new chemical manufacturing and iron production processes, increasing use of steam power, development of machine tools and rise of factory system (Deane, 1971).

Figure 2.1 - From Industry 1.0 to Industry 4.0



Source: www.dfki.de

The Second Industrial Revolution used electric power to create mass production. This contributed to generate a wide range of employment opportunities for non-skilled workers, who became consumers thanks to low-cost products available on the market (Accornero, 1994; Mingione and Pugliese, 2010).

The Digital Age Revolution is the new productivity platform regarded, by the experts, as the Third Industrial Revolution (Murty, 2017); it uses electronics and information technology to automate production, resulting in a change of the traditional work process and in an outgrowing of the old organisational logics (Bonazzi, 2008; Catino, 2012). The Information revolution has caused a change of the labour market, resulting in a consequent decline of the employee number and an increase of skilled workers able to handle complex machinery. This trend occurred firstly in the Sixties, when computers began to be used for commercial purposes and, subsequently, in the Nineties when the 'World Wide Web' use spread rapidly (Berger *et al.*, 2014). Digital logic circuits and their derived technologies (including computer, digital cellular phone and the Internet) are crucial to this revolution.

The Digital Age Revolution caused (and is still causing) upheavals which are much deeper than those caused in the past by the technological revolutions (Frey and Osborn, 2015). The current evolution of this trend is leading to a Fourth Industrial Revolution powered by the Internet and Big Data with the ongoing development of cyber physical systems and smart factories (Schwab, 2017).

At the same time, the different Industrial Revolutions and the increasingly Globalisation have changed the skills of workers who have become more familiar with cognitive tasks and problem solving.

Workers have adapted their skills to new market demands associated to the introduction of new technologies (Ross, 2017).

As a matter of fact, the technological progress has caused two opposite effects in terms of employment: *i)* a decrease of workers as a direct consequence of the product process automation, *ii)* the creation of new professional skills and of production methods which require a high level of work flexibility (Frey and Osborn, 2015).

Furthermore, the technological progress has transformed both working and educational aspects, with a deep impact on the different generations and on their different approach to the labour market (Woolf, 2010). Indeed, Goldin and Katz (2007) defined the twentieth century history as 'the race between education and technology' with some differences among generations.

A 'generation' can be defined as the set of people born in a given period, living and growing up at the same historical moment and having a specific way of thinking, communicating and acting.

This also means that each generation has its own concept of work-life and a different approach to professional life.

Currently the workforce is made up of three categories (Figure 2.2): 'Baby Boomers', 'Generation X' and 'Generation Y'.

Figure 2.2 - The different composition of the workforce: comparison among the three generations

Topic	Boomers	Gen X	Gen Y
Work style	Get it done – no matter what it takes	Find fastest route to results; protocol secondary	Work to deadlines not schedules
Authority/ leadership	Respect for power and accomplishments	Rules are flexible; collaboration is important	Value autonomy; less inclined to pursue formal leadership positions
Communication	Formal and through structured network	Casual and direct; sometimes skeptical	Casual and direct; eager to please

Source: Chester, 2002, our elaborations

The 'Baby Boomers' were born between 1946 and 1964 (a period characterised by a significant increase of population, social security and economic prosperity). Typically, they have a permanent job and a low attitude

to technological tools. Their social identity is strictly associated to a specific work.

The 'Generation X', also known as 'Gen X' or 'Post Boomers', includes people born between 1965 and 1980. This generation typically lives in a context characterised by globalisation, work flexibility, mobility. Its social identity is associated not only to the work itself, but also to the satisfaction deriving from personal job and from private life.

The 'Generation Y', also known as 'Millennials' or 'Generation Next', includes people born between 1981 and 2000 (Cole *et al.*, 2002; Spiro, 2006). They typically live in a context strongly characterised by high technologic development, globalisation, mobility, job sharing and a widespread work flexibility (Howe, 2000). Their usual working day is characterised by an overlapping of work and life activities and by a low need of a permanent workplace.

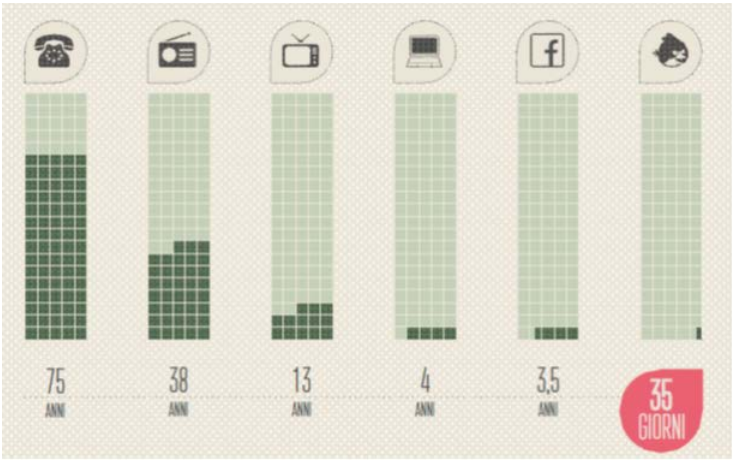
3. Some implications of technological progress

New inventions are spreading now much faster than in the past. Historically, technologies are adopted by a country during an average period of about 45 years and they usually are spread globally in an average period of 119 years.

The Internet has revolutionised this scenario: only 7 years are sufficient to reach every part of the world (Frey and Osborn, 2015).

The technology spreading time differs from country to country and it has been reducing thanks to the Internet (Figure 3.1). It is worth noting that digital technologies are able to put in connection people and ideas very quickly causing a substantial change in lifestyle and way of working.

Figure 3.1 - Technology spreading times to reach the target of 50 million users



Source: Frey and Osborn, 2015

Another important aspect is the number of tools necessary to work: these have been reducing thanks to the technological progress.

Since 1980, the typical desk setup has changed, because of the development of technology (Harvard Innovation Lab, 2015). In the past, a worker needed a desk full of several different tools (i.e.: stationery, fax, dictionaries, bulletin boards and calculator). Over the years, these tools became unnecessary. As matter of fact, icons on a computer desktop have substituted physical objects.

Nowadays a knowledge worker only needs a laptop, a smartphone and a pair of glasses on his desk (Figure 3.2).

Figure 3.2 - Evolution of the desk in the last 35 years

Source: Harvard Innovation Lab, 2015

Tools have been just limited to a computer, thus implying a no need of an office and a desk. In this way, workers can carry out tasks similarly anywhere and anytime.

The Internet is not the only factor that has led to a new attitude to work life and workplace.

The reasons that motivated this trend can be found in the following points: increasing amount of freelancers; work flexibility implying a high mobility requirement as well as a temporary workplace; faster and cheaper travelling than before; availability of 'cloud computing' access anywhere through a simple Internet connection to a smartphone or laptop (Levels, 2015).

4. New systems of work organisation

The new opportunities offered by technology and by the increase of flexibility generated new systems of work organisation, such as 'teleworking' and 'hot desking'. Thanks to these alternative work strategies, companies are now able to reduce costs related, for example, to the management of spaces.

> *"Telework is defined as a form of organising and/or performing work, using information technology, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular basis. The agreement concerns teleworkers with an employment contract and does not deal with self-employed telework"* (ETUC *et. al.*, 2006).

> *"Hot desking is an office organisation system, which involves multiple workers using a single physical workstation or surface during different time periods"* (Dubey, 2009).

The increasing need of a different way of working, not necessarily limited to a specific workplace, has led to the concept of 'smart working', intended as a flexible and fully autonomous working mode which is assessed not in terms of working time but through the obtained results. Moreover, there is neither a workplace nor work-related constraints.

The advantages related to these alternative forms of work have contributed to the spreading of coworking.

5. The spreading of coworking

The digital transformation has changed the economy and the technological innovation system. The actual economic context is characterised by a digital economy, based on digital computing technologies (Tapscott, 1995).

The digital economy permeates all aspects of society, including the economic landscape, the political decision-making process, the way people interact and the skills needed to get a good job. The emerging digital economy has the potential to generate new scientific research and breakthroughs, fuelling job opportunities, economic growth, and improving people life quality.

Nevertheless, the competitiveness of a country strongly depends on its ability to invest in Research and Development (R&S), in scientific and technological training and in the training of specialised professionals.

For this reason, in 2014, the European Union (EU) published 'Horizon 2020', the biggest EU Research and Innovation programme, where is claimed that investment in research and innovation is essential for the future of Europe.

In a frame of economic development and of the emergence of new technologies, two significant paradigms are establishing '*sharing economy*' and '*open innovation*'.

Sharing economy is an economic model in which individuals are able to borrow or rent assets owned by someone else. It is an alternative to the capitalistic system (Comito, 2016).

Open Innovation, also known as external or networked innovation, focusses on the scouting of new ideas, reducing risk, increasing speed and leveraging scarce resources.

These paradigms are indeed instruments to increase competitiveness.

To stimulate and accelerate these dynamics, in the last few years, more and more structures were developed that have become the preferred physical places in which all these concepts merge and find their utmost expression, thus contributing to the creation of an ecosystem of innovation. They are spaces with optimised sharing and collaboration among self-employed, small emerging companies (SMEs, spin-off or start-up), consolidated business

enterprises and representatives responsible for managing relationships. Among them: 'Science Park', 'Business incubation' and 'coworking space'.

"A Science Park (PST) is an organisation managed by specialised professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions. To enable these goals to be met, a Science Park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high quality space and facilities" (IASP, 2002).

"Business incubation is a business support process that accelerates the successful development of start-up and fledgling companies by providing entrepreneurs with an array of targeted resources and services. These services are usually developed or orchestrated by incubator management and offered both in the business incubator and through its network of contacts. A business incubator's main goal is to produce successful firms that will leave the programme financially viable and freestanding. These incubator graduates have the potential to create jobs, revitalise neighbourhoods, commercialise new technologies, and strengthen local and national economies" (INBIA, 2007).

"Coworking spaces are created for the community and with the community in mind. It is not just a real estate business in which a physical space is rented: the role of the facilitator (or host, community leader, or any other title you want to use) is to enhance the connection and the interaction of coworkers to bring them value and to accelerate serendipity. It is a network, not just a place. It is not enough to put a bunch of people together in a room, you must work hard to create the right interactions that form a sense of community" (Valentino, 2013: 87).

The frequenters of these innovation spaces are various, such as digital nomads, freelancers or employees who work outside the company.

Start-ups are preferably set up in incubators or business accelerators and in PSTs, but in the early stages of their lives the lack of money often leads them to choose a solution like coworking.

Coworking spaces and, consequently, their related philosophy represent a bottom-up solution or a collective strategy for facing up to structural changes of the labour market. Furthermore, coworking represents a new modality of organising project-oriented work and largely freelance occupations as found in the cultural and creative industries (Merkel, 2015).

The number of coworking spaces and their variety will definitely continue to grow in the near future.

What does coworking mean?

> *"Coworking spaces are shared workplaces utilised by different sorts of knowledge professionals, mostly freelancers, working in various degrees of specialisation in the vast domain of the knowledge industry. Practically conceived as office-renting facilities where workers hire a desk and a wi-fi connection these are, more importantly, places where independent professionals live their daily routines side-by-side with professional peers, largely working in the same sector – a circumstance which has huge implications on the nature of their job, the relevance of social relations across their own professional networks and ultimately their existence as productive workers in the knowledge economy"* (Gandini, 2015: 125).

When was the term coined?

'Coworking', a term coined by Bernard De Koven in 1999 (Rief, Stiefel, and Weiss, 2016), was fundamentally different from traditional corporations, where work was under constant observation and assessment. The core concept of coworking is to work together as equals.

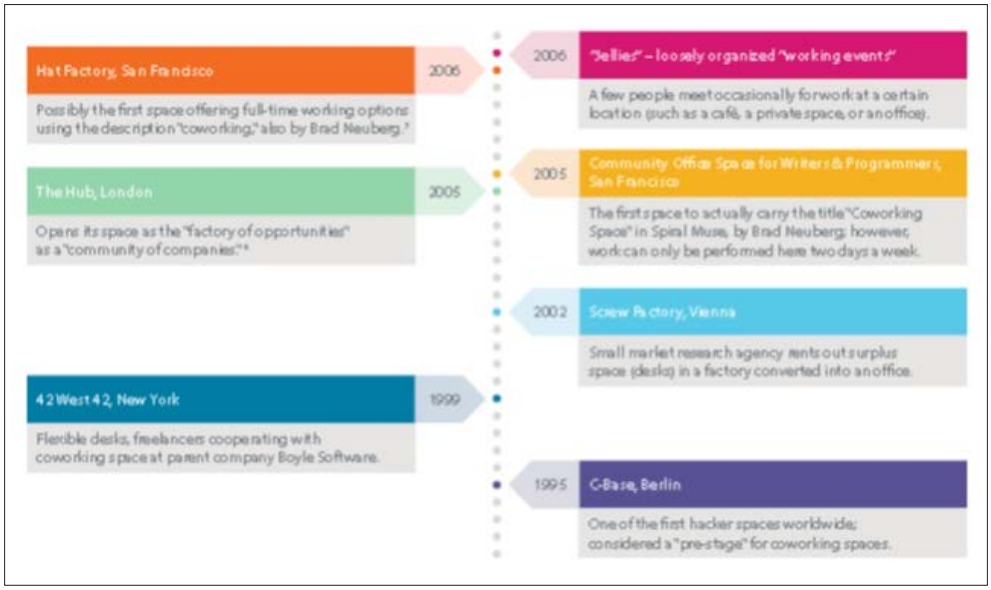
"When I coined the term coworking I was describing a phenomenon I called working together as equals […] I learned that the whole idea of working together as equals was a lot more revolutionary than I had naively assumed. For the most part, people don't work together as equals, especially not in the business world where they are graded and isolated, creating, for the majority of employees, an indelibly competitive relationship […] The environment created was also designed to allow coworkers to work together, as equals. But separately, each working on their own projects, pursuing their own, separate business interests. In this way, people were free to help each other without worrying about competitive pressures. And the result was productivity, community, and, surprisingly often, deeply shared fun" (De Koven, 2013: 45).

When did coworking become a real space?

In 1995, in Berlin a group of computer enthusiasts founded 'C-Base' (Figure 5.1). It is a hacker space considered like an early stage of a coworking space.

"Physical, community-oriented spaces where people with an interest in computers could gather to collaborate and work in an open-environment. While this model deviates from the coworking spaces we know of today, hacker spaces are viewed by some as setting the foundation for today's collaborative workspaces" (Enea, 2017:7).

Figure 5.1 - Coworking timeline



Source: Rief, Stiefel, and Weiss, 2016

In 1999, in the same year when De Koven introduced the notion of coworking, *42West24* sprung into the New York City scene. The space offers a pleasant work environment with flexible membership options for teams and individuals seeking a workspace, although the community concept was not emphasised.

In 2002, the first shared workspaces appeared in Europe. In particular, in Vienna 'Screw Factory' was born. Considered as the mother of coworking, it is usually defined as a 'community centre for entrepreneurs' (Waber, 2014).

In 2005, in San Francisco 'Spiral Muse' represented the first working environment officially defined coworking. Neuberg the founder of this space wrote a blog article clearly describing the hallmark of coworking: the sense of community that it creates between users, thanks to the organisation of group activities that can encourage the sharing of ideas and experiences.

"Traditionally, society forces us to choose between working at home for ourselves or working at an office for a company. If we work at

a traditional 9 to 5 company job, we get community and structure, but lose freedom and the ability to control our own lives. If we work for ourselves at home, we gain independence but suffer loneliness and bad habits from not being surrounded by a work community. Coworking is a solution to this problem. In coworking, independent writers, programmers, and creators come together in community a few days a week.

Unlike a traditional office, in the Spiral Muse Coworking Group we begin the day with a short meditation and circle to set our personal and work intentions […]. Then, we work in the amazing Spiral Muse house, sitting at tables or relaxing on couches as we do our work. Even though each of us is doing separate work, perhaps programming or writing a novel, we can feel each-other presence, run ideas by the community. We take lunch as a group, and then later in the day have a 45-minute break, where we do a different healthy activity every day, such as guided yoga, meditation, a nice walk, or perhaps a bike ride in the sun" (Neuberg, 2005).

Starting from this period, the word 'coworking' became a commonly known word.

On January 2006 'CoworkingWiki', created by the co-founder of Hat Factory, debuted online with the following website description:

"What is coworking? The idea is simple: independent professionals and those with workplace flexibility work better together than they do alone. Coworking spaces are about community-building and sustainability. Participants agree to uphold the values set forth by the movement's founders, as well as interact and share with one another. We are about creating better places to work and as a result, a better way to work" (CoworkingWiki, 2006).

On February 2008, the New York Times published the first article on the theme of coworking.

> *"It seemed I could either have a job, which would give me structure and community or I could be freelance and have freedom and independence. Why couldn't I have both? As someone used to hacking out solutions, Mr. Neuberg took action. He created a world, coworking (eliminating the hyphen) and rented space in a building, starting a movement"* (Fost, 2008).

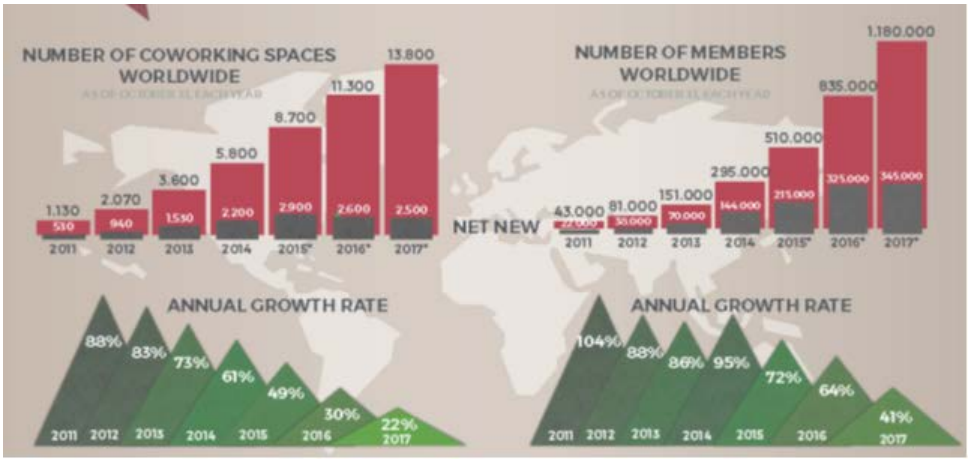
In 2010, 'Deskmag', the first digital magazine on coworking was published online and, in the same year, the first 'Coworking Global Meeting' was organised in Munich, involving 661 people coming from 24 different countries.

Since 2011, 'Global Coworking Unconference Conference' (GCUC), one of the most important conferences, has been periodically organised.

6. A statistical overview

The number of coworking spaces in the world has increased very fast: according to the 'Global Coworking Survey' the estimated number of coworkers in 2017 was more than one million with 13,800 spaces; the trend of these numbers has been continuously increasing (Figure 6.1).

Figure 6.1 - Number of coworking spaces and of members worldwide



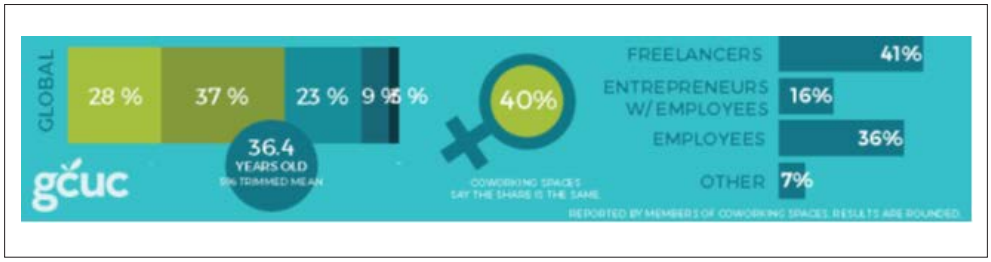
Source: Deskmag, 2017

Another important indicator is the user composition (Deskmag, 2017).

In the global context, coworking members are especially freelancers (41%) or employees (36%) (Figure 6.2).

Usually they are young people who are trying to undertake an entrepreneurial career as double job.

Figure 6.2 - The members of coworking spaces

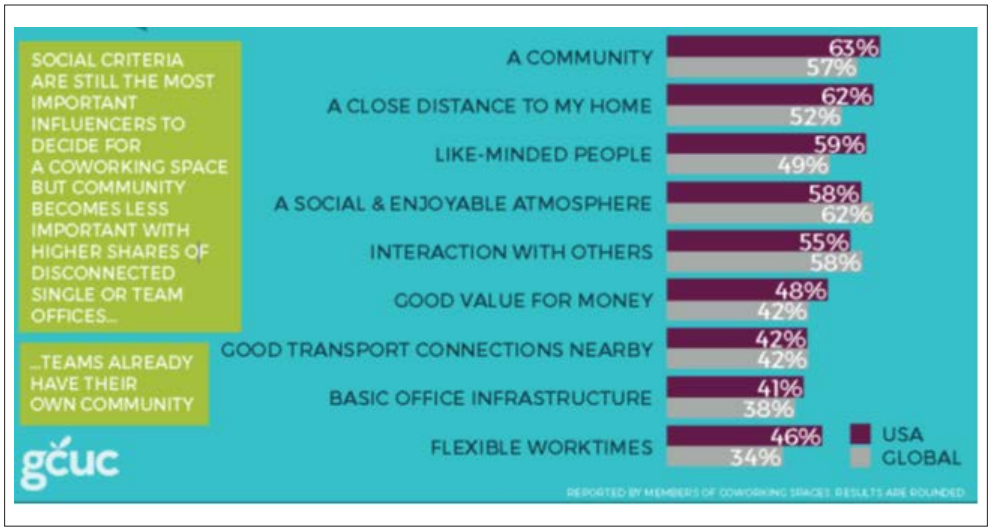


Source: Deskmag, 2017

The average number of members using coworking space has increased constantly: in 2012 the number of people involved was 38 and it doubled in just four years.

Among the motivations that lead users to choose a coworking space, the most frequent is the possibility to create a community (57%), while the lowest frequent is 'flexible worktimes' (34%) (Figure 6.3).

Figure 6.3 - Main reasons to choose a coworking space

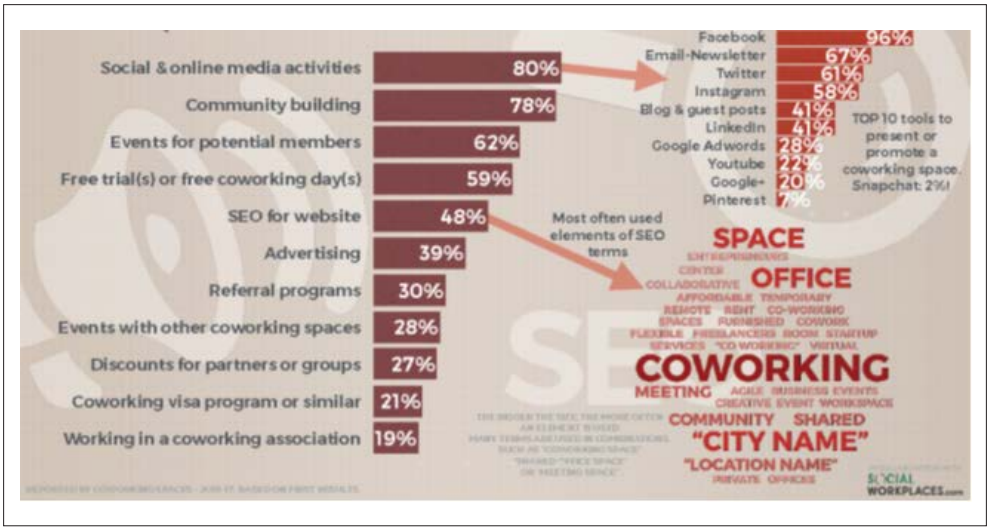


Source: Deskmag, 2017

The top tools to attract new members are the possibilities of promoting 'social & on line media activities' (80%) and 'community building' (78%).

The minority of coworkers (19%) stated 'Working in a coworking association' (Figure 6.4).

Figure 6.4 - Top tools to attract new members



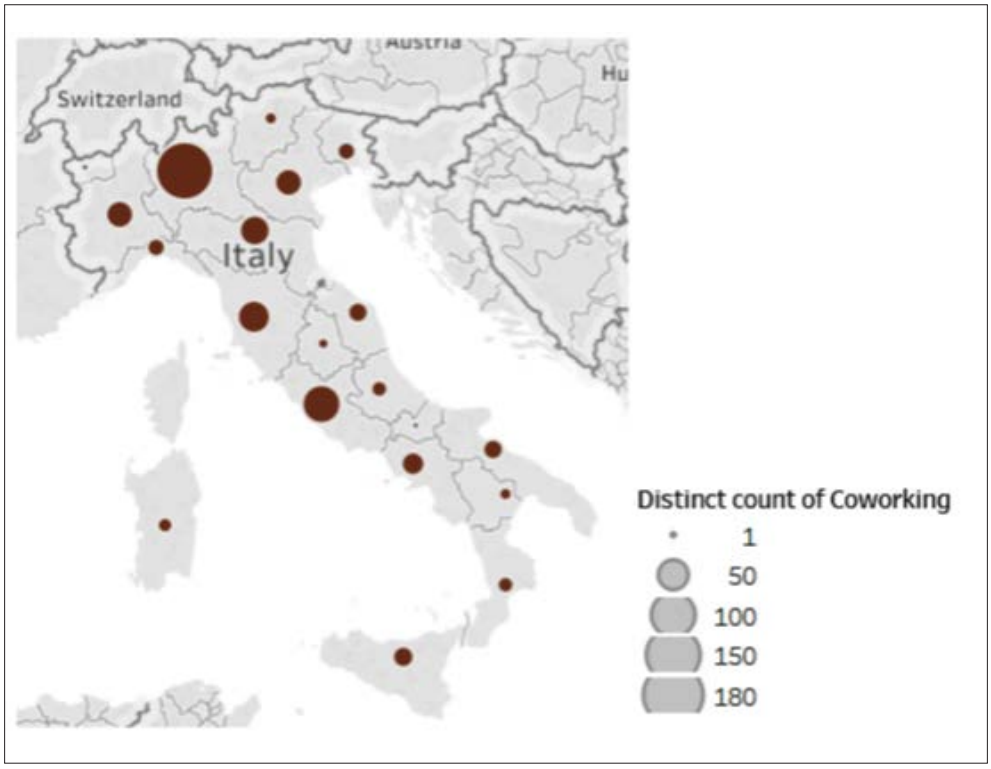
Source: Deskmag, 2017

7. Coworking in Italy

In the Italian context, coworking is rapidly evolving and its distribution is quite varied.

According to the available data (Enea, 2017), in January 2017 there were 588 coworking centres (423 in provincial capitals, 165 in other cities). The following list summarises the geographic distribution: 377 in Northern Italy, 161 in Central Italy and 90 in the South and islands (Figure 7.1).

Figure 7.1 - Distribution of coworking in the Italian regions in 2017



Source: Enea, 2017

In Italy, the first coworking idea took place in Lambrate (Milano) in 2008: 'Cowo' (coworking project) is the most popular coworking network in Italy, having offices in almost all the regions (Piemontese, 2016).

'The Hub' represents a network-connected coworking that has offices in Milano, Firenze and Roma as well as, in Southern Italy, in Bari, Catania and Siracusa.

The highest concentration of coworking spaces is in Northern Italy.

More in detail, in Milano we found besides 'Cowo' and 'The Hub' also 'Plan C', which has been designed for and by women; in Torino 'Cowo', 'Talent Garden', 'Toolbox'; in Alessandria 'Lab 121'; in Padova 'Talent Garden' and 'TalentLab'; in Modena 'Well_B_Lab' (a spin-off cooperative of the University of Modena and Reggio Emilia); in Firenze 'Multiverso'; in Roma 'Cowo', 'The Hub', '7h floor' and 'Let's Make'.

In Southern Italy, some local facilities are located in Napoli, Salerno, Bari, Catania, Siracusa and Cagliari.

A useful tool to find the nearest shared office is 'Coworkingfor', a search engine of coworking spaces.

The regional capacity to propagate and support this mode of work organisation also determines the spread of coworking. In fact, several Regions have promoted coworking supporting policies for young people and startup projects, such as: vouchers to rent coworking stations; funding to create coworking centres, incubators or business accelerators sometimes associated to urban regeneration; financial support for training activities; guidelines for coworking implementation.

The coworking organisational models can be top-down or bottom-up. In the first case, national or international companies or public administrations manage the organisation of coworking.

In the second case, small companies, start-ups and associations are in charge of the organisation.

8. Conclusions

Thanks to the development of the digital age and of the technological progress, as well as to the development of sharing economy and of open innovation, the 'knowledge worker' has no longer the need of a desk set: the new model of digital nomad is a worker who moves around the world making use of coworking spaces. The workplace becomes a shared space, where coworkers can build professional networks facing with today's labour market.

The analysis of the historical development of coworking arrangements highlights several aspects, as summarised in the following points.

- The importance of group activity as a fundamental element to create a sense of community and membership.
- The need of connection with other people as a key for promoting social networks.
- The creation of a sense of community to encourage exchange and contamination of ideas in different areas.
- The increase of heterogeneous teams composed by people that works in different contexts.
- The possibility to rent a desk in a shared workspace as an opportunity to reduce office costs.
- The opportunity to leave workers free of moving, thus also allowing the discovering of new places.
- The development of self-employment.
- The possibility of reusing architectural heritages originally built for different uses.

The occurrence of coworking has been spreading fast in the last decade and it is highly representative of new labour market trends. This solution matches flexibility needs, such as independence, innovation and cooperation and new necessities emerged in the recent past.

Finally, Coworking represents not only a new system of work organisation but also an answer to the isolation risk and to the need of work-life balancing.

For all this reasons, coworking represents a relevant field of study and analysis for official statistics, that should monitor its diffusion in terms both of spaces and typologies. In addition, it is worth deepening also the different aspects related to the users within urban contexts that are increasingly smart and oriented to the citizens' well-being.

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