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NEW NORMAL

Executive summary

The New Normal project's aim is to investigate which could be the new workplace paradigm after the Covid-19 spread worldwide.

The conception of office, and workplace in general, has changed due to the pandemic and the establishment of the new remote working solutions. In this context, it becomes interesting and necessary to understand how the situation will stabilize even after the end of the pandemic. The shift towards a "New Normal" should not be drastic and cannot ignore the opinions, preferences and needs of people, that are the real protagonists of daily work. For this reason, the team developed a human-oriented framework to understand the new working paradigm and to guide the redesign of the workplaces, so that each organization can choose the solution that fits the best its specific case.

The framework is composed of four elements. A survey, to assess the workplace's perceived quality and satisfaction from people's point of view, to catch the changing workers' needs and to consequently adapt the configuration of offices. A quality index, to understand the employees' satisfaction with the as-is workplace situation, it describes the sustainability of the office in terms of comfort and quality of spaces. An Organizational Network Analysis section, to obtain metrics that may give additional useful information on the intensity and importance of some linkages existing within the office under analysis. Three possible scenarios, based on the analysis of the recent architectural trends, together with considerations of the current pandemic situation and the requirements of the offices in the next future, which differ quantitatively and qualitatively.

In the first stage, the team focused on research on the core topics of the project, documenting itself in the internet and participating to weekly events organized by Cariplo Factory, where it was possible to confront with representatives of many important companies and refine the concept based on their feedbacks as well. The definitive framework was developed together with The Adecco Group, that through their expertise, helped the team in the survey creation and design and to maintain contacts with some potential hosts of the project pilot. Finally, the concept has been tested in Astrazeneca's offices; the test gave satisfactory feedbacks on the framework's functioning.

Key Words

organization analysis, working paradigm, workplace design



The new workplace fields.



Abacus of workplace spatial typologies for the reorganisation of offices.

**Project description
written by the
Principal Academic
Tutor**

Cities and buildings have always played a prompting role in restructuring both economic and social practices after pandemic crises. As a “New Normal” framework is emerging, the Covid-19 pandemic is prompting us to rethink basic categories of thought, changing people’s living and working habits, and consequently cities’ spaces and infrastructures. Specifically, the recent crisis is working as an accelerator of a number of pre-existing trajectories of change: individuals, firms, and public bodies were forced to restructure in order to remain productive. However, this situation can represent a positive opportunity to re-design more broadly how work and its spaces are conceived- suffice it to say that normally offices and productive facilities are used for merely 40h a week (on 168 total), thus representing an enormous urban challenge. Therefore, both conceptual and material devices are needed in order to identify the emerging spaces of work and production, as a complex system that can be designed with a particular focus on emerging users/employees’ needs. Starting from these considerations, as well as from the demands of large corporate enterprises brought together by Cariplo Factory, the project explored the post pandemic relations between working patterns and the city, through the interface between architectural design and network organizational analysis.

Firstly, the project team has been involved in a multi-player activity alongside large corporate enterprises, institutions, and startups, in order to develop a common vision for the upcoming future of the workplace. Second, with the support of the academic tutors, the team conducted a study on the current trends and challenges in the structure of the workplace, both regarding managerial organizations and architectural design. Lately, the team, with the support of Adecco Group, developed an assessment tool to understand companies network structures and employees’ needs in relation to the workplace. The assessment tool has been conceived with aim of providing relevant data for the design of future spaces. Astrazeneca Group served as the main case study for the application of the method. The survey has been distributed to over 250 Astrazeneca employees and, starting from the data collected, a design scenario has been identified. Finally, improvements in the current and future offices of the company have been provided. Starting from this case study, the project implemented a new operative and conceptual framework, including protocols for action and design scenarios, for designing the workplace according to the mutable needs of different kind of users in a world in constant and rapid transformation.

**Team description by
skill**

The “New Normal” Team is composed of three engineers and five architects. The working method was based on mutual collaboration throughout the project, to integrate the different skills in the framework development. In the last phase of data analysis and architectural project validation, the students splitted in two groups, according to their study background.

Franco Saverio Pagliochini | As team controller, apart giving his contribute in the analytical field, he maintained contacts with the stakeholders along the whole project to coordinate the working steps with them.

Silvia Bassi | As an architect, given the strong interest in the spatial dimension of both the building and the interiors, she was responsible for the construction of the abacus of spatial workplace typologies. The abacus was built with the aim of being a useful tool for understanding the useful office spaces and their eventual redesign.

Annalisa Bertoglio | As an architect with a particular interest in sustainability and space wellbeing characteristics, she focused on the spatial perspectives of the new office paradigm. In the development of the survey, her contribution mainly focused on the spatial dimension and on the workplace wellbeing conditions.

Federica Joe Gardella | As an architect and with a great interest in Science and Technology Studies and Social Network Theories, she mainly focused on the implications of the social-relational dimension in architectural spatialization, from the research phase to the construction of the framework.

Gaia Gazzaniga | As an architect with great interest for constructions and their history, she contributed to trace and understand the development of the office as programme, space, and place.

Antonino Geraci | He contributed to the analytical part of the framework, adapting literature on ONA and quantitative survey design to the needs of the stakeholders.

Stefano Mondozi | Starting from the very early studies of the new workplace, he played a role throughout the design process. In particular he helped on the scenario’s

framework design, the definition of the related question and also assisted during the final validation of the project.

Giulio Salizzoni | As an automation engineer, he helped in the creation of the survey, in the conception of the indices and in the analytical study of the office's current state.

Goal

The safety problems due to the pandemic situation together with the establishment of the remote work regime, led human habits - like daily commuting, informal and formal meeting, work and travel - to dramatic changes. Therefore, the re-evaluation of the existing paradigms of offices and cities becomes urgent and evident.

An ideal proposition of the problem is to evaluate whether a workplace can be considered sustainable in terms of spatial and social performance, for which the construction of an interrelation - in the office conception - is the aim of the project. The solution developed by the team is a framework in which the output of the data analysis becomes an input in the process of spatial transformation.

Since the human and organizational dimension together with the spatial dimension of the office is - especially nowadays - extremely dynamic, the designed framework should be flexible and repeatable, so as to allow a company to design or redesign their new offices according to the analysis outcomes. This allows companies to better manage office spaces in terms of size, staffing needs, environmental quality and employees' well-being. The analytical dimension and the spatial dimension are linked taking into account four themes about both an internal view of the company in terms of network relations and workers and an external view in terms of city location and services.

To achieve this goal, the project follows some key principles:

- Start from people, investigating their opinions and preferences, so that the office can be redesigned in order to put them in the best conditions to work, that is an advantage for both them and the organization.
- Change the workplace in order to improve not only efficiency and productivity, but also well-being and satisfaction of people, which is the most important factor in our work.
- Data-driven approach in the decision-making process, to make the decision more objective and legitimises it in the eyes of people.
- Flexible architectural solutions adoption, to enhance an iterative process of periodic re-submission of the survey and adaptation of the workplace to the solution that fits the best people's preferences at that specific moment. In this way, the framework becomes a real "smart intervention kit".

Understanding the problem

The pre-pandemic society was already heading towards an increase in remote work, but covid accelerated the changing pattern, as now most of the company questions the environment in which employees live in order to gain more safety, satisfaction and productivity from them.

Currently, various types of office spaces coexist in the company environment and can be classified into three categories based on their level of privacy and accessibility: personal office, conference room, and open space. However, the 'real revolution' is concerned with the difference between the 'accepted' space and the 'real lived' one, rather than the individual spatial typologies.

Smart working has arisen problems that reveals dissatisfaction:

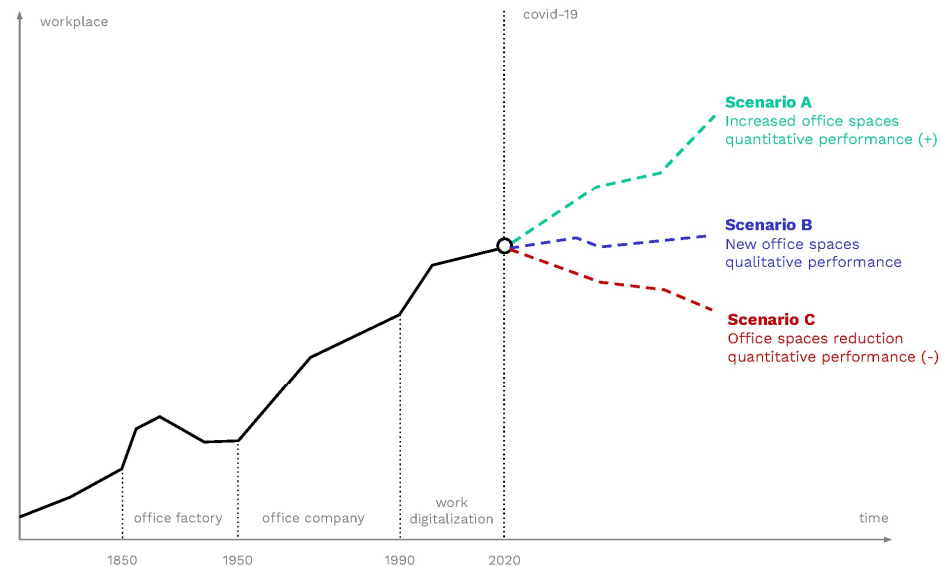
- working in remote makes the communication, which is the basis of the concept of organization, more difficulty;
- many houses are not suitable for supporting a smart working system;
- people feel less connected to the colleagues, 90% of them look forward coming back in the office at least 1/7;
- people feel their productivity fall in absence of social relationships.

Consequently, what could be the strategies to be adopted in a re-design phase?

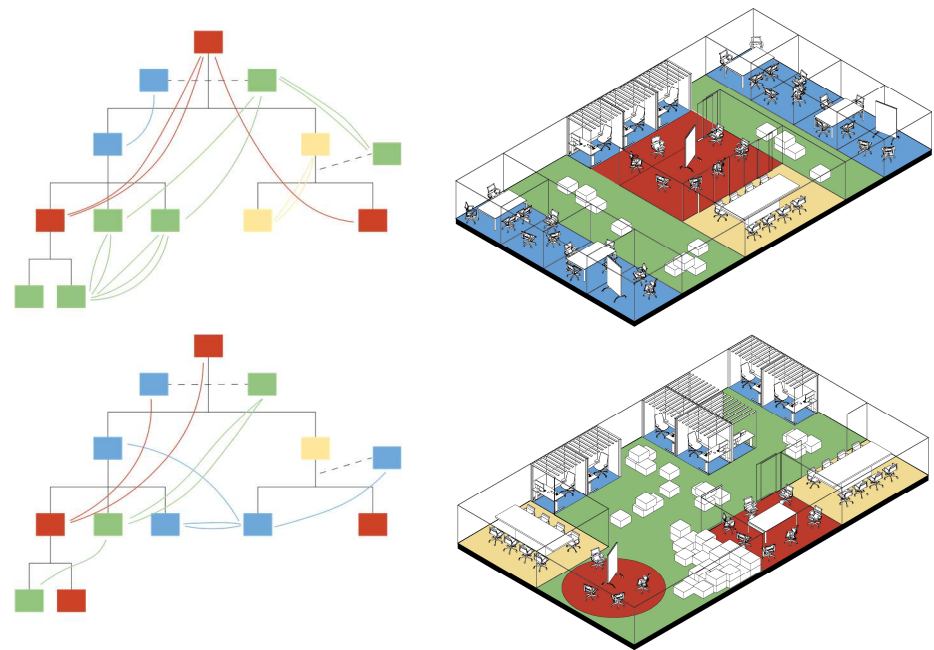
Until these disruptive events office design was just vision oriented: the company acted as an organization and therefore looked at its size and characteristics in order to re-organize spaces according to the organizational model of work and the type of use of the building.

The new workspace is conceived more as a social destination rather than a mere

functional space hence, no more just vision but also human oriented. Consequently, the design of the new workplaces should be holistic, accounting for principles from different fields from architecture, IT and psychology, promoting a data-driven approach, in which the digital processing of the collected data leads to physical changes, thus establishing active relationships with the occupants.



Future workplace scenarios.



Link between Organizational and Spatial dimensions.

Exploring the opportunities

The recent crisis made urgent the conceivment of a new frontier of workspaces, the opportunity to redesign them from scratch. Within this research context, a significant development on the new frontier of workspaces comes from the Architect and Engineer Carlo Ratti within the Senseable City Lab (MIT), for which some innovative principles have been recognized:

- reconfigurability (dimensional and functional), to cope with increasingly fast and unpredictable contemporary phenomena;
- flexibility, the interaction between physical infrastructure (space) and mobile devices (both physical and digital), to radically transform the perception and possibilities of use of the space itself;
- biophilia, to bring quality daily interaction with nature even in the spatial context of the office and promote the psycho-physical well-being of people;
- responsiveness, an environment capable of reacting to the different practices and

actions it hosts and which can be read in the form of data like occupancy, temperature, humidity, etc...;

- “network of networks”, a macrosystem made up of the interactions of these local communities that allow an even more efficient and long-term management and updating.

These principles are innovative not just in their contents, but also in the way they are ‘checked’, strongly Data-driven: network analysis for employees logistic, sensors for the psychophysical comfort, digital frameworks to continuously analyse and update the overall ‘environment’. A great opportunity to use technology for a continuous improvement of the employees’ condition in terms of living space, and therefore of their mental well-being too.

Generating a solution

In the new working dynamic context, it is necessary to create a solution able to capture people’s changing needs, gain insights on their satisfaction and suddenly adapt the workplace to the current situation.

The model proposed by the team connects the human and organizational dimension with the spatial one, starting with a survey submitted to people. From the survey’s answers an index of workers’ satisfaction is computed, providing valuable information to the company executives and suggesting also some potential improvement aspects.

The other output is the design of a new spatial organization of the office proposal. Three possible future scenarios for offices were identified a priori based on research on modern trends: Scenario A, the office shows the need to increase the spaces available; Scenario B, the office spaces would be adequate in terms of size, but need to be reorganized qualitatively and better exploited, Scenario C, the most extreme scenario, in which the establishment of a permanent at least partial smart-working regime allows the companies to reduce the office spaces, given the reduction of necessary capacity.

Each scenario has some “driver questions” in the survey. The driver questions deal with the most characteristic themes of each scenario, and their answers are used to calculate three scores. The scenario with the highest score is selected as the best one and will guide the concrete redesign step.

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