

# HEALTH AND WELLBEING IN THE OFFICE

## THE USE OF MATERIALS IN TIMES OF COVID-19



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## Health and Wellbeing in the Office – The use of materials in times of Covid-19

Many companies are getting ready for their return to the office.

For many and obvious reasons we are most certainly facing a slow and gradual process; limited use of public transportation, lack of child care solutions, new regulations and limits regarding the number of working stations due to physical distancing as well as other still unknown factors.

This much-awaited return to the workplace will surely request a thorough technical and logistic preparation as companies should take into consideration worker's deep concern regarding all aspects of **security** and **personal health** and **well-being**.

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# Health and Wellbeing in the Office



## SOCIAL DISTANCING: UNITED THOUGH DISTANT

The concept of “**social distancing**”, a difficult practice that we were forced to adopt, and in a way got used to, can be interpreted in two quite different ways.

From one hand it should protect us from being infected by other people and getting the virus, while from the other hand it should enable us to keep practicing our social and working duties.

Getting used to wearing a mask, respecting the one-meter-distance and greeting our friends and relatives without the old fashioned hand shake or a hug – all these new habits give us the possibility to go on with our lives. Definitely different from what we were used to but undoubtedly aimed at guaranteeing our personal health and safety.

So in practice we are, temporarily, obliged to be physically distanced one from another. Most probably, we should look at these new rules as a social act of respect towards the people with whom we work and collaborate. In fact, our common concern for our **personal health** conditions has never seen us more **socially united** than we are in these days.

# **SOCIAL DISTANCING: UNITED THROUGH DISTANT**



## POLLUTION AND PANDEMIC ARE THEY RELATED?

We already have the evidence that the actual pandemic has a straight connection to the deteriorated **environmental conditions** of our planet and to the constant **devastation of different ecosystems**(1).

In addition, more and more studies show us that respiratory infections as well as the spread of the pandemic are strongly related to **air pollution** and to the presence of PM (particulate matter) in the air. In fact many researchers suggest that high concentration of PM10 and PM2.5 makes our respiratory systems more vulnerable to infections and complications related to coronavirus disease(2).

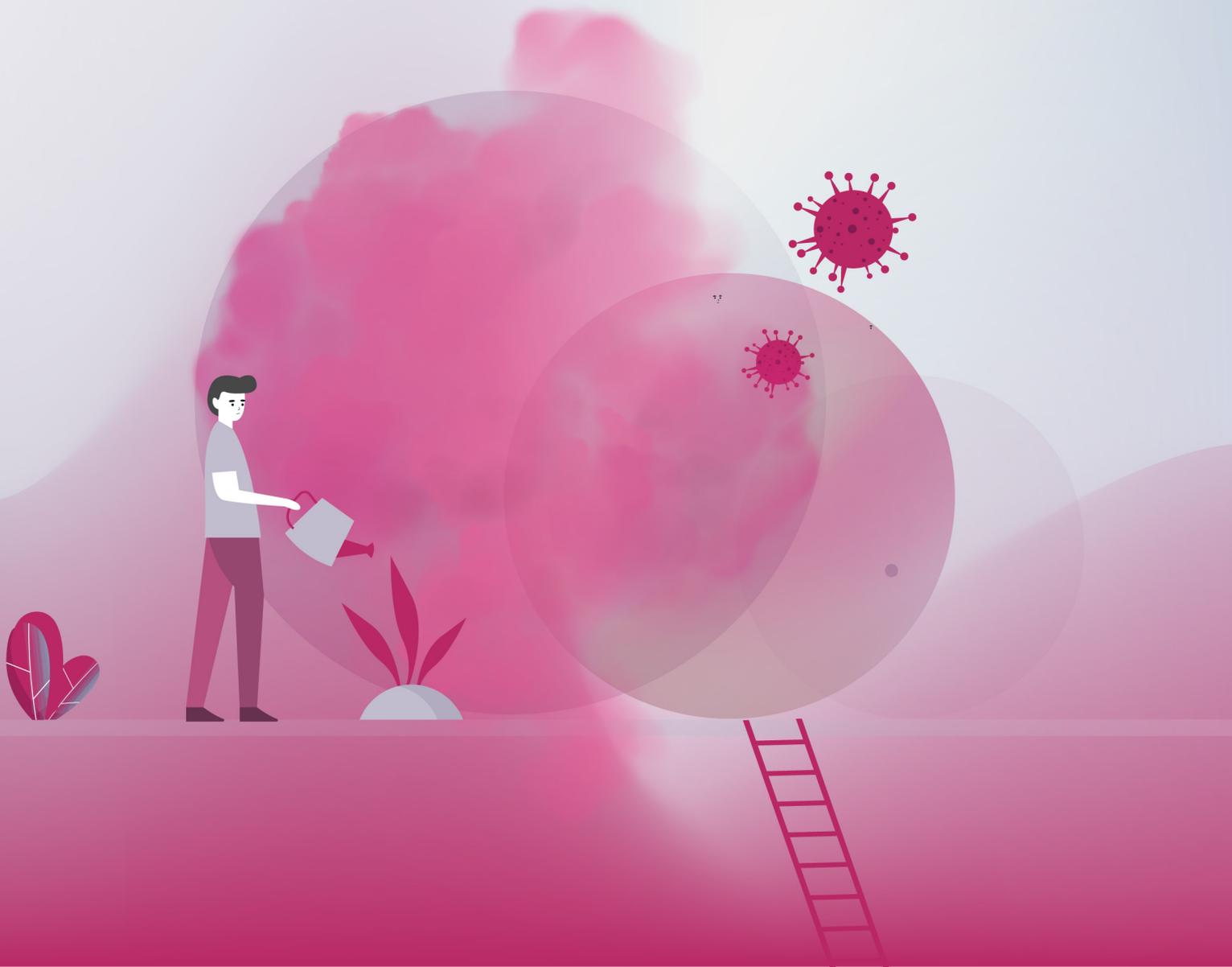
Another possible **relation between air pollution and Covid-19** is the fact that contaminated air raises the risks of acute infection of the lower respiratory tract, especially in vulnerable populations such as elderly and infants.

*We are the "Indoor generation"*

**We are a generation that spends most of its time indoor.**

To be precise most of us are spending an average of 90% of our day indoor (some of us even more), in spaces where pollutants' concentration in the air is frequently 5 times higher than in the outside(3). Hence we are exposed to high levels of PM2.5 which is considered, after poor diet, smoking, hyper tension and diabetes, as one of the most important health risk factor causing more than 2.9 million of premature deaths in the world every year(4).

# POLLUTION AND PANDEMIC ARE THEY RELATED?



## GOING BACK TO THE OFFICE

Governments and organizations are facing great challenges that will most certainly require a good risk analysis regarding spaces, physical contact and virus diffusion. At the same time, they will also have to consider that as much as employees are eager go back to the office and to their daily life activities, they will also be much more demanding on issues regarding their safety, health and wellbeing.

Therefore, when our own life is on stake, the demand for adequate measures and solid guarantees will be a basic condition for going back to work. The environmental crisis of the last centuries has introduced a new psychological reaction, mostly defined by the name of **eco-anxiety**(5), not taken so seriously by the majority of the people exposed to this phenomena.

Concepts like health and wellbeing have never been as fragile and important as they are in this period of a worldwide spreading pandemic.

Going back to work will force us to re-think our worksphere

## GOING BACK TO WORK WILL FORCE US TO RE-THINK OUR WORKSPHERE

In order to tackle all the challenges this dramatic period has brought our way, new collaborations and new partnerships should be formed.

Architects and designers will find themselves working hand in hand with doctors, epidemiologists, psychologists, experts in chemistry as well as being more sensitive to arguments such as space distribution and selection of materials.

Nowadays we are asked to give rapid answers to an unexpected and acute emergency. As this highly contagious virus is being rapidly spread, we are urged to find **immediate measures** and solutions. Companies are activating procedures of sanitization, are changing desk layout in order to guarantee physical distancing, adding signage for a clearer movement indication and distributing gloves, masks and liquids for hand sanitation.

These measures are important, even crucial, to fight possible infections but they will have to be accompanied by a profound study and a set of actions that will address all the factors that can worsen the diffusion of the virus.

**Un importante fattore da considerare è legato alle caratteristiche intrinseche dei materiali che compongono le superfici intorno a noi.**

## TIME TO THINK AND EVALUATE THE MATERIALS WE USE TO FORM THE SURFACES AROUND US

Some recent research have shown the SARS-CoV-2 virus resists better on certain surfaces(6). For example, on **plastic** and on **stainless steel** the virus was still present 72 hours after the material's exposure. After 4 hours on **copper** surfaces the SARS-CoV-1 virus couldn't be detected while for the SARS-CoV-2 it took about 8 hours. When verified on **cardboard**, the SARS-CoV-1 vanished after 8 hours while for the SARS-CoV-2 it took 24 hours after exposure. Today, the market offers various technological solutions that permit to block the penetration of different atmospheric agents from the outdoor inside our buildings. We have **active carbon filters** that block the entrance of **Volatile Organic Compounds, Photocatalytic Oxidation and Ultraviolet germicidal irradiation (UVGI)** against bacteria, **MERV filters** (13 and superior) that stop particles smaller than 3 microns and **Ultraviolet lamps** against the formation of mold. These are all valid solutions that request an attentive design and, due to cost issues, are usually excluded from the budget. Moreover, most of them cannot give us a one hundred percent guarantee. Thanks to the growing diffusion of different **environmental evaluation protocols** such as LEED, BREEAM and WELL the issue of **Indoor Air Quality** is being given much more attention.

Supported by scientific research data and important technological progress, the industry has been able to offer the market materials with low to none emissions of pollutants, guaranteeing a better indoor air quality. Data published by EPA shows that 72% of our individual exposure to chemicals happens indoor, may it be at home or in the office. In these spaces, where we spend 90% of our time, we can find many types of pollutants such as carbon monoxide, formaldehyde, radon, nitrogen dioxide as well as other volatile organic compounds. In order to limit the deposit of germs, bacteria and viruses as well as facilitating ordinary and extraordinary maintenance operations such as cleaning, sanitation and disinfection, the selection of adequate materials becomes a crucial practice. A good and attentive screening of the components that compose our indoor surfaces is also important in order to reduce and even eliminate the diffusion of pollutants and chemical that can have severe effects on our health and well-being.

## TIME TO THINK AND EVALUATE THE MATERIALS WE USE TO FORM THE SURFACES AROUND US

Tools such as third-party product certifications can give us a big help in that. Green Screen(8), Declare(9), Biosafe(10) are just a few examples of product safety protocols used all over the world and considered a valid instrument when owners, architects and tenants need to take the right decision in order to guarantee a better indoor air quality.

In addition to the selection of cleanable, safe, non-pollutant materials, the market offers different innovative products that can actively improve the quality of the air we breathe inside our homes and offices. Smog-eating concrete, antibacterial paints and photocatalytic additives are just a few examples of technologies that have a positive effect on our indoor environment. So is our return to the office safe?

Can we easily go back to our old habits, break areas and meeting rooms knowing that not only we took the measures of minimizing the risk of Covid infection but also that the air we breathe is clean and good for our health?

Perhaps it is time to bring these arguments into the “new normal”? At Il Prisma we always put the experience, safety and well-being of the human being at the centre of our projects. Nowadays we are asked to pay even more attention to health, environmental, social and psychological aspects. We are fully aware of our responsibility in choosing the right materials and designing our clients’ spaces in order to give them the personal security and well-being they need and deserve – especially now that we are facing this crucial pandemic situation – and surely in order to be resilient enough to cope with future challenges.

**TIME TO THINK AND EVALUATE  
THE MATERIALS WE USE TO FORM  
THE SURFACES AROUND US**



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