A healthier workplace thanks to the Internet of Things.

A healthier workplace thanks to the Internet of Things.

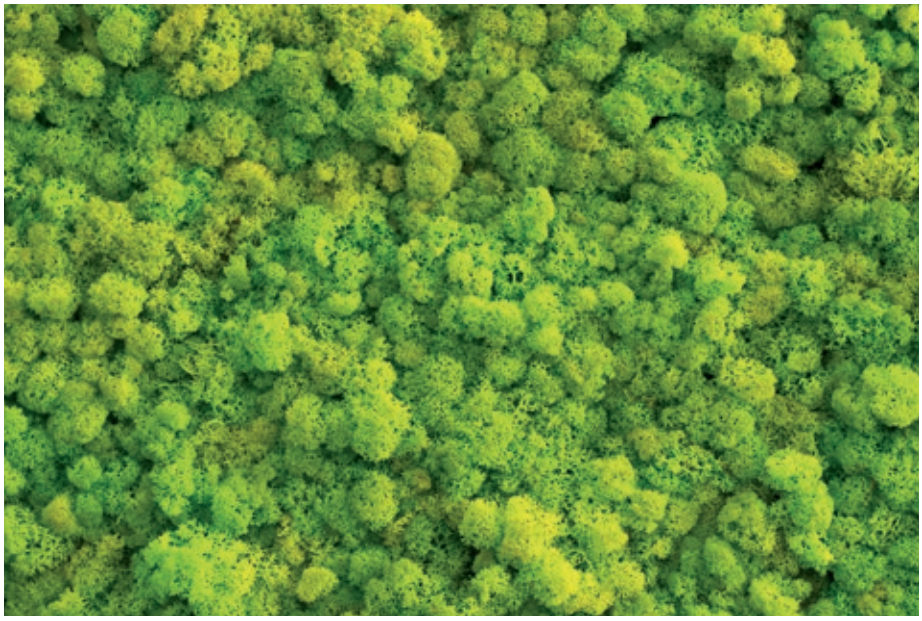
A smart office environment also pays attention to the employee's wellbeing. More so, a healthy workplace is a top priority today. Generations Y and Z in particular are very aware of the possible impact of the working environment on their health. More so, they expect the employer to have an active policy.

A biophilic analogue design.

Every human being has an innate desire to be connected to nature. Scientists refer to this as biophilia. Unfortunately, there is little connection to nature in most offices. A biophilic design of a building brings nature inside.

The creation of a healthy office already starts on the drawing table. In a contemporary design, the architect not only pays attention to -for example- functionality, aesthetics and energy efficiency. The plans must also take into account any other factors that affect the user: acoustics, daylight, spaciousness, natural materials. Green is also part of a biophilic design. Plants can considerably improve the air quality. They absorb air pollutants, harmful biological molecules in our atmosphere. They also capture fine particles and extract CO^2 from the air. Not only do they capture harmful substances, they also emit healthy ones. Plants produce oxygen and healthy negative ions.

A moss wall is a good and maintenance-friendly example that can already be included in the building plan. This wall can match the air-purifying capacity of several trees and thus ensure a constant supply of clean air. Plants have more advantages than just their purifying effect alone. They help to reduce stress, stimulate the creativity and improve the acoustics.



A biophilic digital design.

Plants, daylight and natural building materials are only part of the biophilic story. They form an important part of any design, but can also fail to achieve the objectives if we forget about the rest. In addition to the analogue design, technology also plays a major role in creating the healthiest possible working environment. Several smart technological solutions exist that can create a biophilic design. More so, the youngest generations expect this technology to be integrated in their work environment.

Sensors allow us to measure everything. Temperature, light, sound, CO^2 concentration, air pressure, even the number of people in a room. In this way, we can perfectly map out the entire office, room per room. This measuring and knowing is very useful. But we also need to do something with this data of course. They analyse and interpret the data and then take action. This is where the Internet of Things plays a big part. The sensors that generate the data share them with each other via the internet. This knowledge allows them to manage the light, the heating, etc. which are also connected via the internet.

The Internet of Things (IoT) connects and collects data of things connected to the internet.

The IoT enables us to provide climate control tailored to the space and the moment. The noise level in the meeting room went up? The IoT can intervene at this moment and suggest a break. Is repetitive work done mainly in a certain room? The IoT provides an ideal lower temperature. Is another zone used chiefly for creative jobs? The IoT will provide a warm environment to stimulate this.

We already said climate is much more than temperature alone. The IoT allows us to carry out a complete climate management. By continuously sensing and measuring the environment, the ideal humidity, air quality, light intensity and temperature can always be guaranteed.

The IoT can also take care of the maintenance of plants by keeping an eye on the water level and the composition of the soil. Depending on the type of plant, the plant gets what it needs to stay in the best condition.

IoT and the employee.

In a next step, IoT can even play a role in an individual employee's office life. For example. By connecting desk and office chair to an employee via an app, you can, for example, ensure that the workplace is set exactly how he wants. Height of the chair, the worktop, ambient light: the IoT can customise all this. The IoT can even encourage you to have some exercise through the sensor in the chair. Maybe you can pop over to the coffee machine, your personal barista which knows exactly, thanks to IoT, how you want your coffee but may also tell you to drink enough water for example.

A smartwatch makes the IoT even smarter. Based on heart rate, blood pressure, pedometer, for example, the IoT can help find ways for employees to be as healthy as possible. This can go very far. The IoT could manage the climate of a room based on the collected parameters of everyone in the room at that time. There are examples of companies that reward employees when they choose to take the stairs instead of the lift.

What about privacy?

Of course, the IoT should not evolve into a kind of Big Brother which collects data of employees and uses that data to evaluate the individual employees. To connect people and things, people's data must be rendered anonymously. To fully utilise the IoT, blockchain technology is being implemented in the IoT. With this technology, which is used mainly in the financial world, data is not stored centrally in one location. Data are stored in fragmented places. Only people with the key to those places can collect that data and piece it together.

We’re at the dawn of a new era.

HP has built The Office of the Future: an Activity Based Workplace in which we not only present the different zones but also a home office or on-the-road office. We describe 6 different workplaces and their possible technological configuration.

The Office of the Future will go on tour in 2019 in Belgium and Luxembourg. Check the data and locations, read more and sign up for an inspiration session on www.hp.be/officeofthefuture.