The new digital edge: Rethinking the post pandemic air filtration in the industry

Digitalisation in all forms has developed radically for years, and the Covid-19 pandemic has highly increased the pace of the digitalisation and technology development within industries. It´s a new era and it´s a must to adopt to the new digital edge, otherwise you´ll get outperformed.

Industrial Internet of Things (IIoT) technology are reshaping industrial processes and gives you as an industrial worker or manager, whole new possibilities to monitor your operation and to make performance more effective, sustainable and with improved safety for workers. Also, IIoT is a futureproof investment in order to support regulations and legal compliance, which is getting stricter.

In this white paper you´ll learn about:

- **IIoT and digital development**
- **How IIoT technology can improve your operation**
- **Why digital technology in your overall business strategy is needed to keep up with competitors and legal compliance**
- **How air filtration systems improves workers safety, increases energy savings and generates in a sustainable production**

Businesses has increased their use of Internet of Things (IoT) technology, which has made the barriers to digital disruption even lower than before the crisis. When it comes to air filtration, IIoT is growing and more industries see that digital technology in their overall business strategy is needed to keep up in development. Industries that not meet the new demands will get behind and be outperformed by others in this rapidly evolving landscape. But despite that, IIoT within air filtration installations seems not always to be a prioritised investment. Why?

How to priority among digital investments?

As the digitalisation develops rapidly, industry owners and production managers are forced to make large and fast decisions on investments in digital technologies. At the same time as risking to invest in the wrong digital solutions, no digital investments will definitely get you behind in the development.

There´s a demand from stakeholders that businesses has to communicate about their organization's investments in digital technologies and how they will enable them to keep pace with competitors. Digital technologies is considered necessary and futureproof, and in most cases they are. But it´s often large investments which can make it hard to prioritize if you´re not fully aware of the technology and the value of it.

> ”To see air filtration as the solution may be the thing that define if you will succeed, or not.”

Every owner and production manager want to improve their business. To see air filtration as the solution may be the thing that define if you will succeed, or not. It may not be obvious and thereby not a prioritised investment, but air filtration, especially with an IIoT solution, can have significant impacts on improved production efficiency, the overall operation and to present data.

An investment in a quality air filtration system with IIoT technology will improve your factory operation in many levels. It pays of immediately, and are at the same time a futureproof and safe long term solution, since the smart system gets better and better with time as more data about your operation is collected. Regulations regarding air pollutions, environmental impact and working conditions are also most likely to become stricter in the future and companies must be able to present data in order to support legal compliance, which makes the digital technique a future proof and required solution.

Quality air filtration systems generates improved safety for workers, increased productivity and more sustainable operations. IIoT presents the opportunity for industry expertise to be built directly into the air filtration solution and allow factories to take control of their factory air in a whole new way – with the exact data analytics on it.

A clean working environment through smarter operation of dust, mist or fume collection equipment will directly impact critical areas including employee health and safety, energy consumption and emissions from operation. Clearly an investment worth priority.

Quality air filtration systems generates:

- **Improved safety for workers**
- **Increased productivity**
- **More sustainable operations**

Workers safety, energy savings and sustainable production

95% of the world's population is exposed to poor air and air pollution is the 4th most common cause of death in the world. Industrial production is one of the most important contributor to pollution and risks to personal health. There is a clear link between bad air and Parkinson´s, Alzheimer´s and similar dementia diseases as well as asthma, lung cancer and other lung diseases. Workplaces with dust, fume or gases also effects the workers to easier get sick and to be out of work more often than workers in clean air work environments. Even when not feeling sick, dust, fume and gases effects workers breathing pathways and bloodstream which leads to less energy and causing employees naturally to work slower. Clean working environments on the other hand, generates in healthy and alert workers that works more efficient and are typically happier employees that wants to stay and not leave for another company.

Numerous studies over the last decades have proven that workers who work in the cleanest environments work more efficiently, creating a higher output and a better quality output than those that work in dusty, dirty environments. In addition to the workers, the machines are also operating more efficiently and create a higher output and better quality work when used in clean atmospheres. Filters that are clogged and not monitored uses more energy than necessary which increases the operating cost. Clogged filters can also cause expensive downtime in the production, as well as time consuming and expensive troubleshooting's.

An IIoT connected air filtration system brings the ability to ensure that the filtration system is functioning properly and protects workers as well as production and the planet.

IIoT within air filtration as the solution

IoT can be described as the technologies that connect and exchange data over the Internet. IIoT is IoT taken to the industrial sector and enables to connect the workplace to an online cloud. With IIoT solutions it´s possible to monitor and read real time data remotely on your smartphone, tablet or computer and thereby take full control of your operation at all times. It provides alarms, enable proactive troubleshooting and full analytics on how the air effects your operation and our workers. Simply a smarter approach to factory air.

5 advantages from IIoT within air filtration

- **Gives you full control of your operation**
- **Reduces operating expenses through reduced energy consumption**
- **Reduced downtime and less troubleshooting**
- **Safer working environment**
- **Position your company to be a more sustainable operation**

IIoT is nothing new, but it´s growing rapidly globally and when used within air filtration it creates a whole new dimension to your filtration systems and the control of your air quality. By presenting real time data of your clean air process, operators always have access to the status of a filter and the air quality in general. Because even with a quality air filtration system, the filtration may not be optimised, machines and fans may have an unnecessary energy consumption, filter medias sometimes has to be cleaned or changed and unplanned production stops can accrue. IIoT technology enables potential problems to be detected early and alarms you as soon as something differ in the operation or isn´t optimised correctly and you can instantly adjust the potential problem. This means that energy consumption can be reduced which leads to reduced operating costs and improved sustainability. IIoT does thereby not only increase production efficiency, but also decrees the production costs.

By direct measurements and IIoT analytics near workers breathing zones, ambient dust concentration or opacity levels can each be used to activate control systems or alert workers of problems to minimize the hazard exposure. Additionally, IIoT can be used to track workers hazard exposure for a longer period of time. It also enables the effectiveness of different filter medias to be monitored through regular emission monitoring to ensure that the factory remains within their permits or that recirculated air remains safe. IIoT is an proactive technology for adjustments to be made in time to ensure workers safety, energy saving and a sustainable production.

”Rethinking is now,
or you´re too late.”

As said, the pandemic has highly increased the pace of the digitalisation and technology development within all industries. The IIoT development within air filtration gives us better opportunities for sustainable productions than ever before. Rethinking is now, or you´re too late.