

cleanair magazine

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Information from Zehnder Clean Air Solutions · No. 1/2015

The financial benefits of Zehnder Clean Air Solutions are measurable



Competitive advantage for C&S wholesale's logistics unit ES3

Happy workforce at Wila

Reduction of cleaning costs and absenteeism at Coop

Perfect climate for beach sports

Welcome to Clean Air Magazine 2015



It is our ambition to do everything to solve our clients' problems. By exceeding your high expectations, we remain on the inside track.

Satisfied customers are valuable. This is something we have understood for a long time, but it is only now that we are realising just HOW valuable they can be. Since 2012, we have had an ongoing service contract with AHOLD in the Netherlands. You can read about their experiences in Clean Air Magazine no.1, 2013.

AHOLD have been very satisfied ever since they started using Zehnder Clean Air Solutions. As such, we are especially pleased to have been entrusted with the task of supplying clean air to their logistics partner in the USA, ES3. Using this installation as a springboard, we have decided to establish Zehnder Clean Air Solutions in the US. You can find more on this case on page 22 and 23.

There we will take a detailed look at the ES3 installation, and you will also be able to read about installations in other large storage facilities, such as the one we provided for COOP in Switzerland. We will also explain how the air was dramatically improved in the extremely harsh environment at the HeidelbergCement plant for alternative fuels, on the Swedish island of Gotland. Meanwhile, effective measures have been implemented to provide Wila in the Netherlands with a better production environment.

More and more clients are noticing that a service agreement with Zehnder Clean Air Solutions is not only an excellent way of ensuring a clean and efficient environment, but will usually also contribute to a positive cash flow. Improve your environment and save money at the same time! Read more on pages 12 to 15.

Happy reading!

Peter Krantz
CEO, Zehnder Group Nordic AB

New business around the world

More people are discovering the advantages of using Zehnder Clean Air Solutions. Here is a selection of companies from various sectors that have recently chosen to clean their air using Zehnder Clean Air Solutions.



Nomeco is the largest pharmaceutical wholesaler in Denmark and the leading supplier to pharmacies and hospitals. Nomeco is also an important strategic service partner for the pharmaceutical industry in Denmark and the rest of the Nordic Region. They have installed Zehnder Clean Air Solutions in their main warehouse in order to reduce dust levels to the lowest possible.



Atlas-Copco Secoroc develops, manufactures and distributes the high-quality, cost-effective rock drilling tools for the mining and construction industry. At their plant in Fagersta, which has 600 employees, they have installed Zehnder Clean Air Solutions to remove metallic dust, reduce excess heat in the ceiling and to protect sensitive 3D-cameras in the quality assurance department.



Martin&Servera is a leading wholesaler to the restaurant and catering industry in Sweden. Logistics is run from five different main warehouses. Their goal was to cut short-term absenteeism from 6% to 4%, reduce dust levels in their warehouses and reduce cleaning costs by 20%. They installed Zehnder Clean Air Solutions in 2014.



DSV Solutions in the Netherlands is involved in third-party logistics and is in nine locations around the country. The main reasons for installing Zehnder Clean Air Solutions were to create a healthier work environment and reduce cleaning costs.



Norsk Glassgjenvinning handles all glass recycling in Norway and they also deliver recycled glass to glassworks. The glass is crushed and mixed with silicone to be used in road construction. In 2014, they installed Zehnder Clean Air Solutions in order to reduce dust levels and create a healthier working environment.



Schenker is a global logistics company that has installed Zehnder Clean Air Solutions in several sites within the group. For the installation in Hannover-Langenhagen, the aim was to remove the dust in the crossdock terminal, and to create a healthier working environment with less absenteeism and with a motivated workforce.



HUB logistics is one of the leading logistics service companies in Finland. They are responsible for the overall internal logistics services to Valmet Automotive's Uusikaupunki factory, which manufactures the Mercedes-Benz A-class. HUB logistics employ circa 500 people and has 19 offices in Finland, Germany, Estonia and Russia. Zehnder Clean Air Solutions was installed in HUB logistics's 7000m² logistics center in Uusikaupunki in 2014.



Tally Weijl is a fashion company based in Basel, Switzerland. The company is present in more than 30 countries around the world. Zehnder Clean Air Solutions was installed at the company distribution centre in Lörrach. The aim was to remove the large amounts of dust created when handling paper, cartons and other packing material.



Thunder Group is one of the largest foodservice distributors and OEM manufacturers for the North American market. They market and distribute more than 3500 products to more than 3000 distributors and importers in both retail and commercial businesses. Zehnder has installed Zehnder Clean Air Solutions for the front end of the plant where most of the business is concentrated.

Better working environment and cleaner air in the crushing shed



Machine operators at the HeidelbergCement Miljö AB plant for alternative fuels in Slite have to deal with a challenging working environment full of dust and dirt particles. Since Zehnder Clean Air Solutions was installed 2 years ago, the working environment improved considerably and the amount of dust has reduced by 61%.

Founded in 1871, Cementa AB, part of the international HeidelbergCement Group, is one of Sweden's largest manufacturers of construction materials. Today Cementa AB is a modern, high-technology business that manufactures and sells cement to the construction industry in Sweden and around the world. The factory at Slite on the island of Gotland produces 7,000 tons of cement per day or 2.5 million tons per year. Slite is also home to HeidelbergCement Miljö AB, a sister company to Cementa, that specialises in alternative fuels for cement kilns.

Effective energy use and a phasing-out of fossil fuels are included in the Cementa vision to have zero CO₂ emissions by 2030. This is where the HeidelbergCement Miljö plant comes in. The Slite factory uses alternative fuels that is waste materials such as plastic, paper and wood as substitutes for fossil fuels to fuel the cement factory. For this waste to work as fuel for the cement factory, it must first be crushed to smaller pieces (50x50 mm) before it can be used in the kilns. The crushing is done by two large mills at the HeidelbergCement Miljö Slite plant. The mills both crush 5–6 tons of plastic and other waste every hour, 24 hours a day, all year round.

Dust-filled air

The crushing process generates a lot of dust. Some materials generate more dust than others. Irrespective of the material crushed, there is a considerable amount of dust in the air, generated by the crushers in the crushing shed. It creates a bad working environment for machine operators in the crushing shed and it also increases wear on the loader engines.

“Previously, we had the usual extractor fans and water sprayers, but those could not solve all our problems. We could not find any decent extraction system or any other system that would improve working conditions in the crushing shed. This forced our machine operators — who work in 12-hour shifts, 24 hours a day — to work in an environment that was definitely unhealthy” says Björn Engström, Manager of the HeidelbergCement Miljö plant for alternative fuels at the Slite factory.

A long-standing requirement

The air in the plant contained dust, dirt and particles generated by the crushing process. There are air filters for the machine operators when they are seated in their cabins. As soon as they have to enter the crushing shed for example at the end of their



shift, when the shed is blown clean with compressed air, they must wear breathing apparatus. But Björn Engström and his colleagues did not think that the breathing apparatus was sufficient.

“The HeidelbergCement Group strongly focuses on the working environment and safety. As a result, we worked intensively to find other solutions”, Björn Engström continues.

For some time we had felt that something had to be done to improve the working environment, but we had not found any suitable solution. Then we got in touch with Zehnder and had the chance to visit one of their clients at a similar plant in England.

This visit convinced Björn Engström that they should try Zehnder Clean Air Solutions at the Slite plant.



"In the summer of 2012 we started with a trial period of Zehnder Clean Air Solutions which would be capable of cleaning the air twice per hour. The result was quickly seen as a positive one. After a short time we noticed a clear difference in the shed's air quality; particle levels were a lot lower. So we decided to go ahead with Zehnder" says Björn Engström.

A big difference in air quality

No sooner said than done, HeidelbergCement signed a service agreement with Zehnder and now they have Zehnder Clean Air Solutions in the crushing shed in Slite. Zehnder technicians come every two months in summer, and every three months in winter to replace the filters. Apart from that, the air cleaning systems just keep on working and doing their job in the crushing shed, much to the delight of Björn Engström and the machine operators.



Scan this QR code or use the web address below to watch the customer video.

www.zehnder.co.uk/video/cas_heidelbergcement



"It is much better than before, the number of particles in the air has been reduced considerably, resulting in a marked improvement in the environment. This is confirmed by the measurements we performed before and after installing the air cleaning systems" says Björn Engström and adds: "Of course, they cannot remove all the dirt and the dust in the shed; the conditions are extremely difficult. However, I cannot see any other system being as efficient as the Zehnder one."

Flexibility with Service agreement

He likes the arrangement of using a service agreement, since it is more flexible for HeidelbergCement because it does not have to own the product with all that entails.

"A service agreement allows us to decide if we want to end the cooperation with Zehnder, even if today there is no reason to do so. The air cleaning systems are simply too good for us to do that" Björn Engström adds with a smile.

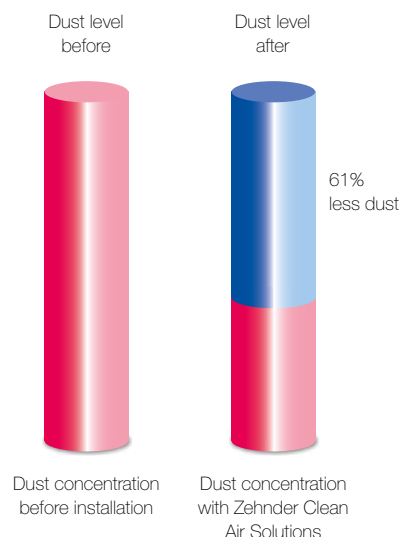
We don't want to be without them

Two years after installing Zehnder Clean Air Solutions, they are crucial for everybody working in the crushing shed in Slite, and none of the machine operators could imagine working there without the systems.

"I recently performed a test and turned off the air cleaning systems in order to compare the air quality before and after. It was immediately evident that the air got worse and visibility was reduced. An hour after I had switched them back on, the air had improved considerably. It was a real eye opener" says Björn Engström.

Main facts

Company	HeidelbergCement
Interviewee	Björn Engström, Manager of the HeidelbergCement Miljö plant for alternative fuels at the factory at Slite
Business	Construction industry
Location	Slite, Gotland, Sweden
Dust source	Dust from plastics, wood, paper and other waste that is crushed in order to be used as alternative fuel in the cement factory
Dust reduction	61%
Benefits	Considerably improved working environment for machine operators and less dust that may damage loader engines



Impressive reductions leading to a happy workforce



From a working environment with fumes from coolants and dust from CNC milling machines, to a healthier one with clean air. Having Zehnder Clean Air Solutions in the factory means a marked improvement for the dutch company WILA.

Staff health is always on the agenda for Wila, the world's largest manufacturer of press brake tools and clamping tools for the sheet metal working industry. At the Lochem factory, approximately 250 people work in five shifts, 24 hours a day to produce high-quality press brake tools. During each shift there are between ten and ninety people in the factory.

"Staff health is very important to us. That is why we are continuously working on improving the working environment and we are always looking for new solutions" says Maarten Broersma, QSHE Manager responsible for quality, safety, health and environment at Wila.

Facts about Wila

The Dutch company Wila is the largest independent manufacturer of press brake tools in the world. Wila was founded 1932 in Lochem in the Netherlands. Over the years, a die casting company has turned into an internationally recognised high-technology company that manufactures press brake tools and clamping systems for the sheet metal working industry. Wila works together with many leading press brake tool manufacturers, such as Trumpf, Amada, LVD, Safan and Bystronic.



Coolants spread fumes

The production of a press brake tool starts with high-precision milling of the metal parts for the tool using a digitally-controlled CNC milling cutter. During this process, heat is created due to the friction between the cutting tools and metal being milled. To remove the heat that is generated, coolant is sprayed at high pressure on the milling tools and the metal. The coolant also increases the service life of the milling tool.

"The problem is that the coolant generates powerful fumes that lower the air quality in the factory. These fumes are not toxic but they are unhealthy and not pleasant to breathe in", says Maarten Broersma.



Maarten Broersma, QSHE Manager

Milling dust

Additionally, there is a department in the Wila factory where milling of raw material, is performed. The process creates metal dust that hangs in the air and gradually settles everywhere.

"Before we installed the Zehnder air cleaning systems, we had mechanical ventilation that cleaned the air approximately four to five times an hour, but that was not enough" says Maarten Broersma.

The workers complained that the air in which they were working, which contained fumes from the coolant and the dust from the milling machines, was often difficult to breathe and irritated their lungs and throats. Since the working environment is a priority and high on the Wila agenda, they naturally wanted to do something about it.

"During a visit at one of our suppliers in Germany we noticed the Zehnder air cleaning systems; they had some installed, and were very happy with them. We decided to give them a try, and got in touch with Zehnder. Our aim was to reduce the amount of dust in the air by at least 50%" says Maarten Broersma.



Zehnder Clean Air Solutions at work

Initial tests

Zehnder started by installing two dust meters in order to measure the amount of pollution in the factory air; they wanted to reduce the levels by at least 50%.

"One month after installing Zehnder Clean Air Solutions, they carried out the measurements again", says Freek de Vroet, Account Manager at Zehnder. The results showed a reduction in dust of 84% and 72% respectively at the two measuring points.





A happy workforce

Wila has had the air cleaning systems almost a year now, and the workers feel that the air has definitely improved. The working environment is better with cleaner air and with fewer workers suffering from headaches and respiratory problems.

"It is clear that there are now less fumes in the air", says André Ordelman, Assistant Chief in production unit 4. His colleague Tonny Mengerink, a grinding machine operator, agrees: "Yes, the air is much better now." And what about productivity – has it increased since the factory air got better?

"We do not have any numbers that directly correlate the improved air with increased productivity, but on the other hand, a happy workforce will in turn increase productivity, so who knows", says Maarten Broersma.

Impressive numbers

Since conditions differ between the summer and winter months (doors and windows are open during the summer months, meaning better ventilation), Zehnder decided to measure the factory air on two occasions, August and January, and then perform a follow-up check one year later. For January, the amount of dust and coolant fumes in the air was reduced by 75% and 66% respectively at the two measuring points.

"These numbers are quite impressive. We were fully confident of Zehnder Clean Air Solutions before they installed the equipment, but we still wanted to set a target in order to ensure a good result. Zehnder has definitely not let us down", says Maarten Broersma and adds:

"A funny thing happened: one of our suppliers that often visits us and is used to spending time in the factory, told me soon after we had installed the air cleaning systems that he thought the air in the factory had improved. The point is that he wasn't aware of the fact that we had installed the air cleaning systems, but came up with the statement out of the blue!"



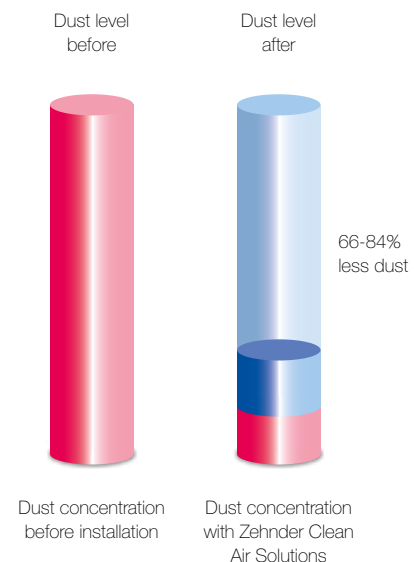
Scan this QR code or use the web address below to watch the customer video.

www.zehnder.co.uk/video/cas_wila



Main facts

Company	Wila
Interviewee	Maarten Broersma, QSHE Manager
Business	Sheet metal working industry
Location	Lochem, Netherlands
Dust source	The factory air was filled with fumes from coolants used in the manufacture of press brake tools, and in other places with metal dust from milling machines
Dust reduction	75% and 66% respectively at two measuring points in January; 84% and 72% respectively at two measuring points in August
Benefits	Cleaner air with significantly less fumes and dust, thus providing a better working environment for all factory workers



A perfect climate for perfect beach sports!



Intelligent Zehnder air cleaning systems effectively bind the dust from the sports sand, which creates the optimum hall climate for beach volleyball.

Intelligent air cleaning systems ensure that breathing air is pure when playing sport in a Berlin-based beach volleyball hall.

Beach61 is one of the biggest beach volleyball companies in Berlin and has been offering the people of Berlin year-round beach volleyball fun for 10 years. After changing locations several times in the past few years, in September 2014 the company found its "perfect" home in Schöneberg, a central district of Berlin. Alongside eight outdoor courts, the core of Beach61 is a 2,400 m² indoor hall with 10 courts and facilities spanning a 400 m² area (including showers, changing rooms, a sun terrace and a bar area). The hall has a translucent roof construction, which allows 70% daylight into the space. "Rather than feeling like they're in a massive shoe box, this makes players feel like they really are on the beach," explained CEO Christian Köhler.

As is essentially the case for any beach sports centre, Beach61 had to overcome the major challenge of getting the high level of dust formation in the sand under control. Sand in an indoor hall poses particular challenges as it does not get its share of rain or other natural moisture. This causes the sand to dry out more and more over time and become increasingly dustier as a result. "This basic dust problem gets even worse," Köhler continued, "as only a very specific, fine sea sand with round grains can be used for beach sports. The angular sand grains in this sand are thoroughly rinsed by the water until they have been worn down into a round shape. This gives this sea sand a high level of flowability, which is a very important feature for our sport as small sand hills are

formed every single time the players stop and start running. Nevertheless, the flowability of the sand means that these hills collapse again very quickly. If this were not the case, the court would be immediately littered with sand hills and holes and would pose an increased risk of injury to the players." Sea sand also complies with the German Volleyball Association's guidelines regarding the level of brightness. According to these guidelines, sports sand for beach sports should reflect as much sunlight as possible so that it cannot warm up very quickly. As we use the same sand for the indoor and outdoor areas, it goes without saying that this performance characteristic of the sports sand is also pertinent to us.

Although the sea sand is industrially washed and sieved several times, light dust particles still remain attached to the grains, which of course become airborne in said dry conditions. The result: dusty air in the hall with dust swirls that are of course particularly strong due to the very fine sea sand.

There are now several options available for limiting the dust problem: On the one hand, you can add water to the sand to bind the dust. However, this option is associated with the problem that the moisture evaporates, even more so in winter when the air is heated, creating an almost subtropical climate in the hall. Understandably, these are not good conditions for doing sport. A second option is to add mineralised oil, or even rapeseed oil, to

the sand to bind the sand particles in the sand. The disadvantage of this option is that you need to dispose of the entire sand/oil mixture around every 5 years as special waste. It goes without saying that this process is elaborate and costly and the sand does not look as good. At some point it will start to look dirty rather than nice. Skin particles also stick to the "oil sand", which leads to an unpleasant smell after a certain amount of time. Furthermore, the sand does not feel very nice for the players as it clumps. Players also get the impression that they are stepping in pasty quicksand. None of these dust-reduction measures were possible for Beach61, so CEO Christian Köhler – inspired by air suction systems in joineries – started to look around for modern air purification technologies on the market. During his research, Köhler came across Zehnder – in its capacity as Europe's leading manufacturer of indoor climate solutions – and its Zehnder Clean Air Solutions industrial air cleaning system. "The Zehnder system solution immediately impressed us as it focused on very quickly

system extremely efficiently filters the high proportion of the fine-grain sports sand dust from the air, which solves a key problem for any company running a beach sports hall. As a result, beach volleyball players can look forward to experiencing the perfect hall climate for their sport. You now only get sand in your eyes at Beach61 if you do a flying lunge and land on your stomach..."



and highly efficiently filtering dust particles out of the air. This guaranteed a pleasant air quality for the players," said Köhler when explaining his decision to use Zehnder Clean Air Solutions.

At Beach61's current location in Schöneberg, 12 air cleaning units were suspended in the hall, spaced out between 10 courts each measuring 200 m². Each Zehnder CleanAir 3 unit circulates air at 3,000 m³/h and all 12 units circulate air at an overall rate of 36,000 m³/h. If you consider the fact that the total volume of the hall is around 22,000 m³, all of the air in the hall is exchanged or filtered approximately every 45 minutes.

Moreover, the filters are replaced by Zehnder itself within the scope of the service agreement. The service interval and possible maintenance works are also defined in this service agreement. Beach61 CEO Christian Köhler is impressed by Zehnder Clean Air Solutions in every respect: "This industrial air purification



Main facts

Company	Beach 61
Interviewee	Christian Köhler, CEO Beach 61
Business	Volleyball sports center
Location	Berlin, Germany
Benefits	High reduction of sand dust, pleasant air quality, feel-good ambience for the players

The financial benefits of Zehnder Clean Air Solutions are measurable



Reduced contamination, fewer process interruptions, less maintenance, reduced absenteeism, improved hygiene, lower heating costs... the list is long. The case histories in this magazine demonstrate many benefits of Zehnder Clean Air Solutions to our clients.

But how can you calculate the value of these benefits? Many of Zehnder's existing clients have done this, and we can benefit from their experience. Here are typical methods, plus some specific examples.

Of course every case can be different, and your Zehnder Clean Air Solutions Sales Representative can help you to create a tailor-made calculation for your business.

Reduction in cleaning costs

For organisations where general cleanliness is important, this can be one of the biggest benefits. Many benefits can be directly quantified: for example reduction in cleaning staff, materials, and rental of specialist cleaning equipment. Reduction in cleaning can also mean less machine downtime and fewer process interruptions which can be measured or estimated.

Experience of using Zehnder Clean Air Solutions at a logistic center in Europe enabled it to reduce its cleaning staff by 0.5 Full Time Equivalent. This single measure saves more than the entire cost of their solution (including the service contract with Zehnder plus energy costs).

Lower heating costs

In buildings where the work area is heated, the ceiling-to-floor air circulation ensures that warmer air which rises to the ceiling is no longer wasted. This has a direct effect on reducing heating costs. Measurements by one of our biggest logistics clients from Sweden showed that the temperature difference between ceiling and floor reduced from around 3 degrees to only 0.2 degrees with the installation of Zehnder Clean Air Solutions. This equated to a 15% reduction in energy costs for heating.

Reduced equipment maintenance and repair costs

Less dust and contamination leads directly to increased reliability and reduced costs. Clients report savings of up to 30% in maintenance. While the benefits you gain will be specific to your operation, we can help you estimate these in advance based on the experience of clients in similar circumstances.

Reduced absenteeism

Clean air has been found to reduce absenteeism significantly in many industries. Not only does this reduce wasted labour costs, but also administration such as the coordination and management of replacement workers.

A food logistic customer compared absence rates over the 12 months before and after installing Zehnder Clean Air Solutions. The reduction in absenteeism was equivalent to 1.9% of their entire workforce. Although they had taken other initiatives at the same time, the management attributed at least 50% of the reduction in absenteeism to the provision of clean air. This single measure saves more than the entire cost of their solution (including the service contract with Zehnder plus energy costs).

Improved existing air handling costs

Installing a Zehnder Clean Air Solutions doesn't mean additional cost. Often we find that our clients can reduce or eliminate existing air extraction or filtration measures. Our client, a well-known logistics company, noticed that they could reduce the replacement of existing air ventilation filters by 50%. The main cost saving is the labour and servicing costs of replacing the filters.



The cumulative benefits can make the business case

Occasionally one single benefit can justify installing Zehnder Clean Air Solutions, but many business cases are not so straightforward. More usually it is the total effect which really makes the case. Your Zehnder Sales Representative has a template to help work out your cumulative benefit.

Our client, the leading company offering postal service throughout the Nordic countries calculated the cumulative financial effect of their three main benefits: reduced cleaning, reduced maintenance and improved heat recovery. No one or even two of these would fully make the financial case. Adding together all three benefits made the case on a completely measurable financial basis. And after installation, the actual benefits measured exceeded the business case estimates by nearly 10%.



Qualitative benefits are important – and can sometimes be quantified

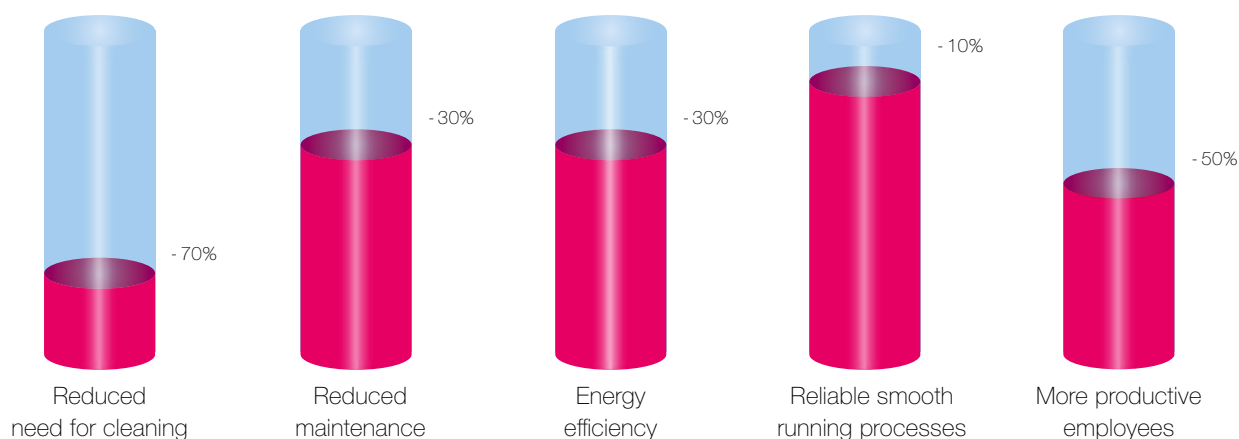
Not all benefits have associated costs which can be measured directly. But often reasonable estimates can be made in these circumstances – and it is important that they are, to create a full picture of costs & benefits. For example overhead costs are often not identified separately and some proxy measure can be used to pro-rate them; possibly some assumptions have to be made about fixed overheads. Zehnder has experience in assisting clients to identify and quantify such benefits: just ask!

ES3 in York Pennsylvania, USA handles food products and so must comply with strict sanitation regulations and inspection regimes. They have experienced some direct financial benefits, such as being able to redeploy sanitation labor. But the main effect of the 80% reduction in dust has been on the cleanliness of goods - ultimately this is crucial to the future of their business.



It can be difficult to demonstrate a financial value for improved customer image. However reduction in returns, rework, complaints and product replacements can all be measured, and have a direct financial benefit. In some cases the value of reduced business risk can be assessed. Reliability of on-time deliveries can be measured and their financial benefit estimated. We have examples of clients rescuing lapsed customers due to clean air improvements, and the value of these customers can also be measured.

The value of Clean Air Solutions is measurable.
The pay-back has been proven by many of our clients.



Most of the calculations will relate to cost reductions; sometimes a financial gain can also be added.

Key points to remember in constructing your calculation:

- Nearly all benefits have a value which can be calculated or estimated.
- Many qualitative benefits can have a value assigned to them: and the others can still be described as part of the business case.
- Clients often take more than one initiative at the same time, in order to maximise benefits. In this case, estimate or pro rata the effect that is due to Zehnder Clean Air Solutions.
- Include all costs; for example energy costs to run the installation of Zehnder Clean Air Solutions in addition to the Zehnder Clean Air Solutions service fee.
- Avoid double counting the same saving in more than one category.
- Remember to include any savings in overheads.

It is not complicated – and we can help

Your Zehnder Sales Representative can help you calculate the value of Zehnder Clean Air Solutions to your business. We have many examples of good practice from our clients, and often use our template developed from this experience as an ideal guide to calculating Net Cash Flow. We then work with you to adapt your business case to the needs of your organisation.



"We expect a growing demand for air purification in Switzerland"

Guido Rocchinotti is the new Sales Manager at Zehnder Clean Air Solutions, Switzerland. He has a broad experience in the industry and a background ranging from technical buying and project management to functions such as Key Account Manager and Sales- and Marketing Manager in the machine and the electronics industry. He worked internationally for several years and is an experienced sales personality in the Zehnder sales team.

You're the new Sales Manager in Switzerland. Could you tell us a bit about your role at Zehnder?

My main tasks together with the sales team are to expand the business area and to increase awareness of Zehnder Clean Air Solutions in the market. Fortunately, the business in Switzerland has developed very well and we are constantly attracting new customers and satisfying them. The steady growth requires further adaptation of the organization and requests good communication between the sales consultants and employees from installation and service. Currently, we are continuing to expand the existing service organization.

Tell us about your background and what you have done before you came to Zehnder.

I originally completed an apprenticeship as a Mechanic and worked for a few years as a Technical Purchaser. I received a deep insight into the production and procurement processes from companies, from which I benefit today. Since I changed to the Sales branch 18 years ago, I have worked both in Switzerland and internationally, for example, as a project manager in sales, as a key account manager and as a sales manager in the machinery and electronics industries. Three years ago I developed my professional career again and successfully completed the diploma degree in Sales and Marketing Management at the University of Applied Sciences in St. Gallen Switzerland. Before Zehnder I worked for a company in online electronic distribution, as a sales manager for business customers in Switzerland.



Guido Rocchinotti, Sales Manager at Zehnder in Switzerland.

What attracted you to work for Zehnder?

Zehnder is well known in our region and has an excellent reputation as an employer. Right from the beginning I was fully enthusiastic and fascinated about the issue of Air Cleaning. In my new position I can profit from my valuable experience as a sales manager for sand blasting machines as well as extensive knowledge in the field of climate control for machine controls and IT data centers.

What is the level of interest for Zehnder air cleaners in Switzerland?

"There is great interest in having a clean working environment and dust-free air. Many companies have problems with dust in their production, warehouse or logistics areas. In particular, export-oriented firms face strong competition and have to compete internationally despite comparably high costs in Switzerland. They therefore depend on a high level of innovation, continuous improvement and efficient process management. Customer expectations of cleanliness, reliability and punctuality are very high, especially in logistics. Through the Zehnder Clean Air Solutions service concept, Zehnder provides the desired cost optimization and competitive advantage. Our solution was sometimes not well known in Switzerland, and customers are therefore pleasantly surprised to finally find a suitable concept."

How do you solve the specific needs of Swiss customers?

"Often they have very narrow and limited spaces in the workplace, or low ceilings. With our flexible installation options, we can normally achieve an optimal solution for mounting on walls or ceilings. Many customers have existing heating and ventilation systems which incur high costs for replacement filters and maintenance, and yet do not bring the desired result. Our air cleaning devices are used in addition to the existing system and to address the major dust sources. As a side effect of the better air circulation, energy and heating costs are also reduced. An increasingly important factor is creating a healthy working environment and the reduction of absences due to illness. A positive image through clean air increases staff motivation and satisfaction, has a positive effect on the quality and contributes significantly to the client company's success."

What is the most common reason for Swiss customers to choose Zehnder as a supplier?

"Zehnder is a well-known Swiss company in the heating, ventilation and air conditioning industry, known especially for designer radiators and ventilation systems. The company has an excellent reputation in Switzerland. Long-term customer satisfaction is our number one priority! Our approach to offer customized solutions therefore includes a detailed survey with analysis of visible problems and negative effects of dust. Using state-of-the-art measurement technology we can carry out a precise measurement of hazardous particulate matter content (PM10). Of course, the dust measurement can be repeated after installation of the equipment to confirm the difference. The data will be professionally evaluated. The Zehnder service contract offers not only the contractually regulated services (cleaning, filter replacement and warranty), but also free consultation and customization of the system which can lead to further savings."

How do you look at the future for Zehnder in Switzerland? Any specific plans that you can tell us about?

"I am confident that we can provide many companies a competitive advantage with our solutions in Switzerland. Satisfied customers and continued success confirm our efforts. We therefore expect a growing demand for air cleaning in the future. We are currently investing in the further expansion of the sales and service structure for Zehnder Clean Air Solutions in Switzerland. I really enjoy working for Zehnder!"

"We are currently investing in the further expansion of the sales and service structure for Zehnder Clean Air Solutions in Switzerland."

Impressive results in Coop's retail logistics center



With Zehnder Clean Air Solutions, Coop is able to improve the work environment for employees in the distribution centre and save a net CHF 891 per employee in the first year.

As one of the largest retail and wholesale companies in Switzerland, Coop provides an enormous range of products to supermarkets, DIY stores and filling stations.

Coop is one of the most successful companies in Switzerland with more than 2,000 sales outlets and over 75,000 employees all over Europe. In the retail industry, Coop covers large sections of the value chain from in-house manufacturing and packaging to wholesale, selling directly to customers and handling all logistics. The Coop logistics centre in Schafisheim is a major hub for the delivery to outlets. The central warehouse for the Coop Pronto division supplies 275 shops, some with filling stations, all over Switzerland.

Dissatisfied employees

In the course of an internal employee survey at COOP, it was determined that the level of dissatisfaction was high at the Schafisheim site.

This was partly due to poor working conditions, in particular due to the high level of dust in the air (movement of goods, abrasion of handling equipment on the floor). Employees complained about breathing issues, headaches and heavy deposits on technical equipment and goods at times. "Some employees even had difficulty breathing due to the dust build-up. That was tough", says Fabrice Gugler, shift supervisor for picking. In addition to the employees' health, the cleanliness of the goods also plays an important role for COOP. Delivering dirty goods is unthinkable for the company.



Guarantee of halving dust levels

Coop was looking for a solution that reduces dirt and dust in the building. The working environment, employee satisfaction and the cleanliness and hygiene of the building and goods is to be sustainably improved.

In their search for a suitable solution, Coop came across Zehnder Clean Air Solutions and got in touch with a representative.

After carrying out a dust level reading and analysing it, the further course of action and the Zehnder Clean Air Solutions products were discussed. One thing that stood out from the Zehnder Clean Air Solutions offer is that it includes service and maintenance. In addition to the installation itself, the regular filter replacement schedule is monitored and implemented professionally. Rudolf Frei, Manager of the Distribution Centre Schafisheim is convinced: "That means I have a guarantee as the operator, that the units will always work properly and perform as required."

Furthermore, Zehnder Clean Air Solutions guarantees to reduce dust by at least 50%.

75 percent less dust

The initial reservations of COOP with regard to the system were quickly eliminated. A dust level reading carried out after installation showed a dust reduction of about 75%, convincing COOP for good of the air cleaning system.

Within a very short period of time, positive employee feedback indicated an enormous improvement in the working environment and their satisfaction with the improved air quality in their environment.

Since installing Zehnder Clean Air Solutions, absenteeism has been almost cut in half. The previously high rate of 5.8% on an annual average is now at a benchmark level of 3.9%. Slavisa Stojanovic, Order Picking Manager, is enthusiastic: "Customer satisfaction in the form of in-house customers, i.e. our staff. As mentioned, it is obvious that the employees are more content and happier. The absence rate has improved and we are happy to work here."

Rudolf Frei, Manager of the Distribution Centre Schafisheim also supports the solution: "Thanks to these units, absenteeism has been dropping steadily and they will help it stay low in the long term." The fact that less cleaning is needed, which also results in lowered expenses, is another factor that contributes to a good mood. "I'm really impressed with Zehnder and its products, especially the product that we're using here." Rudolf Frei states: "The fact that the working conditions were improved considerably accounts for at least half the reason why the absenteeism has dropped by 1.9%."

Daniel Hintermann, Site Manager Coop Schafisheim, is already looking to expand the business relationship further. "I wouldn't hesitate to use the system again if I had a similar problem with air pollution, because it turned things around very quickly. We assume that the results will be equally good with the next measurements. In that case I would definitely install the system at a different site and I would recommend it to others. Yes, we're really very happy with it."

Main facts

Company	Coop Pronto
Interviewee	Rudolf Frei, Manager Distribution Centre Schafisheim
Business	Retail logistics
Location	Schafisheim, Switzerland
Dust reduction	~75% after installation
Benefits	Clean working environment and goods, lower absenteeism, satisfied employees, less cleaning



Scan this QR code or use the web address below to watch the customer video.

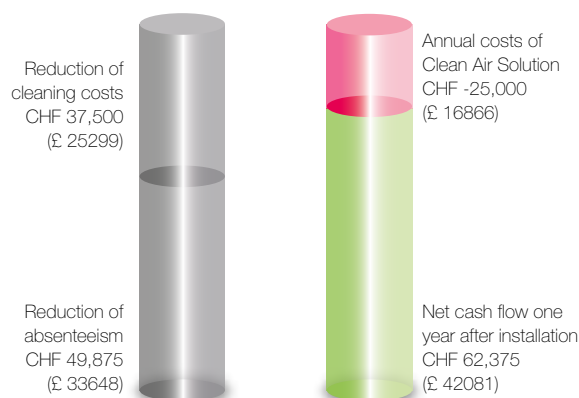
www.zehnder.co.uk/video/cas_coop



The results are impressive from a business perspective.

As shown in the figure on the right, reducing absenteeism and the costs for cleaning did more than just compensate for the annual costs of the air cleaning system. Already in the first year, Coop had an additional net cash flow of CHF 62,375 (£ 42,081), which corresponds to an internal rate of return* of 52%, or savings of CHF 891 (£ 572) per employee in the distribution centre.

* The IRR method allows for the calculation of a (theoretical) average annual return for outflow that incurs irregular and fluctuating yields.



Total control over the entire process

Research, development and production – all under one roof – at Motala, the birthplace of Swedish industry. For Zehnder Clean Air Solutions, close collaboration between the development department and production is very important and is one of many reasons for the company's success.



In the 4000 m² Zehnder factory at Motala, the company's development engineers sit together with the production staff that manufacture all Zehnder air cleaning systems according to the specific client orders. Nothing is left to chance, and the company is in full control of all stages – from the first design sketch to when the air cleaning system is installed on the client's premises.

"Since we run everything from our Motala plant, we are in complete control of the entire process. This is somewhat unusual today, and something we are proud of; we consider it an important competitive advantage" says Carry Turesson, Production Manager at Zehnder Group Motala AB. He goes on to say: "All our products are also specially designed according to client requirements. We participate in all stages of the process – from the technical solution and installation to the replacement of filters".

Carry Turesson,
Production Director
Zehnder Group Motala

Made to measure

Motala (Östergötland County) is often described as the cradle of Swedish industry, and nearby Linköping with its university has influenced the city. Zehnder's development and production plant has been here since 2009.

"This used to be the plant of our subcontractor before the whole production chain was integrated into the company. Since January 2009, all production has been carried out at the Zehnder plant; this is of benefit to our clients since we have full control of all stages in the production, and can focus totally on what we are doing" says Carry Turesson.

The Motala plant is totally adapted to Zehnder's requirements and tailored to the production of high-quality air cleaners. 80,000 Flimmer filters are made every year on the site, and product development is always on the agenda.

The latest technology

"Not so long ago, we upgraded all our models, and we have produced a product family with a common design and technical standard in line with the latest technology. We are meticulous about applying, amongst other things, energy-saving features to our fans, and all our products are energy efficient", Carry Turesson continues.

The Zehnder production department works according to Kaizen, the Japanese workplace philosophy.

"This means highly flexible production and a quick delivery to clients, while still maintaining top-notch quality", Carry Turesson concludes.



Clean air gives competitive advantages



The main objective at third party logistics expert ES3 is to save time and reduce costs for its customers in the consumer packaged goods (CPG) industry. ES3 achieves this by using advanced automation to make the supply chain faster, more efficient and more profitable for manufacturers and retailers of all sizes.

Its York facility is, at 1.5 million square feet, the largest automated multi manufacturer food warehouse in the world, serving more than 60 manufacturers. ES3 has the capability to store up to four hundred thousand pallets of non-perishable food items at any one time at this facility, which ships approximately five million cases per week for clients in the food service industry and manages more than 20,000 items.

A clean environment is essential in the food industry.

Cleanliness, naturally, is imperative in a facility where food products are stored.

"In addition to maintaining standards that keep our customers and suppliers satisfied, we are regularly subjected to inspections from industry agencies such as the Food and Drug Administration (FDA) and the Association of International Bakers (AIB), as well as audits from individual manufacturers, customers and retailers," says Mark Franke, Senior Director of Engineering and Maintenance for ES3.

In a facility the size of ES3's York warehouse – which sees 1,000 trucks in and out every day – keeping dust and dirt away from product and under control had become a major operational issue and expense.

Weekly audits in the pallet resorting area, which is next to an area of the warehouse where product is stored, showed a significant amount of dust, both airborne and on the flat surfaces, causing numerous problems:



- High haze levels in localized areas of the facility where pallet handling occurred.
- Physical barriers had to be set up to protect the nearby food storage area from dust.
- ES3 was spending thousands of dollars a day on manual cleaning.
- ES3 was experiencing excessive and costly equipment wear and tear due to the accumulation of dust on pallet jacks and fork lifts.

ES3 needed a solution that would provide the level of dust removal required to create a healthier environment for employees, keep the building food-safe and inspection-ready and meet ES3's high standards for cleanliness, which typically exceed FDA requirements.

"Clearly, installing the Zehnder Clean Air Solution helped us tremendously to do just that. To have technology nobody else has gives us a competitive edge. We are very much looking forward to expanding our business relationship with Zehnder."

Fast and significant improvements

One of ES3's largest clients solved a similar environmental issue in its European facility by installing Zehnder Clean Air Solutions with great success. ES3 reached out to Zehnder just as the company was looking to expand into the U.S.

"We monitored ES3's York location for 10 days," says Rob Matthews, Vice President of Sales and Operations for Zehnder Clean Air Solutions. "We confirmed the pallet and resorting area did, indeed, have high levels of dust."

Zehnder Clean Air Solutions were installed, along with two remote dust-monitoring sensors that provide real-time feedback.

Results and added value

Within just a few weeks of the installation of the Zehnder Clean Air Solutions, ES3 saw noticeable improvements:

- An 80% reduction of dust in that area of the warehouse.
- A very high level of customer satisfaction with the product being delivered to them.
- Dust levels in the workspace utilized daily by nearly 1,400 ES3 employees no longer presented a safety concern.
- ES3 was able to remove the physical barriers and redeploy sanitation labor to other critical areas of the building.



Scan this QR code or use the web address below to watch the customer video.

www.zehnder.co.uk/video/cas_es3



Main facts

Company	ES3
Interviewee	Mark Franke, Senior Director of Engineering and Maintenance
Business	Third party logistics
Location	York, USA
Dust source	Dust from unpacking and handling of goods in the warehouse
Dust reduction	80%
Benefits	Lower dust levels leading to more safety and hygiene, cost savings, increased equipment efficiency as well as satisfied customers and employees

