



The best possible factory through early involvement

The early involvement of contractors, suppliers, and engineering firms in maintenance work and other projects helps to lower costs, create targeted solutions, and ensure an efficient process. We asked various people if they have noticed that early involvement has been occurring more frequently and what they feel its advantages are. Involving specialists in a project during its early stages may seem like the most logical course of action, but it actually occurs far less often than it should.

Dagmar Aarts

“If your goal is to conduct a project quickly while keeping your costs low, quality often falls by the wayside,” says Paul Rijks (asset management expert at the engineering and consulting firm Bilfinger Tebodin). He has noticed that most clients who arrive at his doorstep are only just realizing that their asset management systems have never truly been well designed. “This causes reliability issues for them when dealing with older assets. And that costs a lot of money, because it translates to product losses. We recommend that they address the problem head-on and implement a new maintenance management system. This requires some financial investment at first, but over time it actually saves money. It makes your system safer and more secure, because you encounter fewer disruptions and incidents.”

These are just a few of the reasons why businesses prefer to be involved in a project at an early stage. In fact, in a perfect world, they would be included before deciding on any investments in new construction or maintenance projects. In order to develop a good maintenance concept, it is necessary to know exactly how a system works, what it should deliver, and all its associated logistics. How is a company going to provide for its customers? “Once you know that, you can answer the question of how long a system is able to be inactive,” says Wouter van Gerwen (business development manager at Bilfinger Tebodin). “You use that to adapt your maintenance plan and factory design accordingly. For example, if you deliver to your clients as soon as they make a request, then building a warehouse serves no purpose.”

According to Van Gerwen, if you involve experts too late in the process, the factory that you build will not be the best one possible for your activities. He once came across a company that had built a hall in order to address the foul-smelling odors caused by waste. By the time he had become involved, it was already too late for the better solution: processing the waste more quickly. There was no need to build that hall in the first place.

Change

Van Gerwen also says that, in this process, it is becoming increasingly common for the requirements during the design development to be modified, because the external



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Journalistic integrity

For this article, eight different businesses were asked the question of how they viewed early involvement. Bilfinger Tebodin, Langkamp Technology, Stratt+, and Stork contributed.

factors change. “If we are not involved when establishing the purpose of a factory, it is difficult for us to contribute during these changes. In our designs, we attempt to sort out matters according to any potential changes beforehand. We call it modular thinking. This enables us to easily modify a design. One example is equipment that can be exchanged. In most cases, there are only a few innovative functions specific to a factory; the rest are standard. In fact, a great deal of these are so standard that you can simply rent the equipment from a supplier. If you have a 10 bar compressor, but it later turns out that you need a 100 bar compressor, you can exchange it with the supplier.”

Early involvement

Van Gerwen has noticed that companies are developing fewer and fewer projects on their own, and involving other parties during the early stages. However, in his opinion, there is still room for improvement. “In traditional planning, contractors and suppliers are excluded from the concept phase. It is difficult to involve them earlier due to contractual purchasing rules. If you have already involved them in the concept phase, you are often unable to assure them that they will receive the assignment in the end. This takes its toll on their creativity when devising the best solution for a factory. Fortunately, working with integrated construction teams is an emerging trend. Not all product requirements or applicable technologies can be determined in advance nowadays.”

The right questions

Peter van der Ree (director of business development and strategy at technical service provider Stork) is also noticing that parties are increasingly involving experts in a project at an earlier stage. “In particular, these are the companies that don’t focus on one point in time with blinders on. Instead, they have a better understanding of what the total cost of ownership will be and bring in the expertise of external parties sooner rather than later. When we run through the entire construction and design process with clients, there is always something that wasn’t planned for. And we also involve experts in specific areas, because they ask the right questions. For instance, is there a lifting eye bolt in the right location so that it can be used for expansion during maintenance? Has equipment been installed far enough away from a wall, so that maintenance workers can access it properly?”

Costs

According to Van der Ree, time and investment spent on a project always yield something in terms of quality. “If you work off a maintenance concept, you will no longer need to improvise on site. That makes things safer, improves quality, and lowers costs.” Edwin Slabbekoorn, who works as a cost estimator at Dow via Stratt+, goes over these expenses. “Early involvement is essential for establishing clear information about these upcoming costs. With the assistance of contractors, suppliers and construction management, you have to estimate the problems and uncertainties that may arise and the costs that accompany them ahead of time.

Why not?

For costs, efficiency, and quality, the early involvement of experts from outside the company is important. Why isn’t this always done then? According to the people we spoke with, this is because the primary focus is on short-term costs. Simply put, it is more expensive to involve experts in your project from the outset. Paul Rijks explains: “People who collaborate on the start of a project move on to a different one later, never seeing the advantages regarding costs over the long term. They also do not see the advantages of properly designing the asset management system. Maintenance is often still seen as a cost item, yet it is actually about earning money. If you set up your maintenance management system properly at the start, it will pay off in the long run. The problem is that projects take time and cost into account, but attention may not always be paid to quality.”