### **SIEMENS**

## Maintenance as a core competence

Five good reasons to trust in Siemens as an outsourcing partner

Industry Services

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# Keeping production running smoothly at all times

"We have been a reliable partner for industry for many years now. Companies such as Daimler AG, MTU Aero Engines AG, and Bayer Crop-Science Deutschland GmbH trust the maintenance expertise Siemens has to offer."

Arno Schmitt, Siemens AG, Director Integral Plant Maintenance

#### 1. Maintenance today

Industrial manufacturers today are focusing overwhelmingly on constantly modernizing their production plants. They generally forget about making the adjustments to their maintenance strategies, processes and the associated organizational work which they should be doing at the same time.

Yet it is precisely this ongoing adjustment of maintenance to business goals and strategies that makes maintenance a living, active concept. Out-of-date structures can only keep up with rapidly changing market requirements sluggishly and with difficulty. A great deal of potential is left unused here, and costs and performance are not at the required level.

Hardly any organization is in a position to provide the necessary skills by itself and to take its maintenance organization, using its own resources, to such a top level that it withstands international comparison. The available resources and necessary knowledge are lacking, and there is often no continuous support from the company management, which is absolutely essential here.

When asked what business objectives they pursue in their plant management, the main points companies mention are plant availability, cost transparency and control, extended working life of plants, safety and risk management, improved quality and yield and a reduction in spare parts stocks. A glance at the current trade press shows a move away from the classic term "maintenance" toward "asset management," which has already found a place in the world of standards. The current standard ISO 55000, which covers asset management, has been developed on the basis of the British standard PAS 55. ISO 55000 covers lifecycle management, risk management and maintenance management.

Maintenance specialists can use this standard for development and support, and additionally consult DIN 31051, which contains the tasks and basic principles involved in maintenance activities.

Thanks to the advent of larger and less expensive storage possibilities, the continuing capture of data from production is also leading to an inflationary increase in data which have no calculable benefit for the operator. What is the purpose of collecting the data, and who is in a position to correlate the data and derive any benefit from them? What potential lies hidden in these volumes of data?

The next generation of maintenance specialists has its new maintenance elements in its sights already. Terms like analytics, data mining, mobility and cloud computing are currently circulating. Other focuses are on strengthening preventive maintenance and collating plant master data.







Process representation according to ISO 55000

# Making sure you can rely on standardized processes

### 2. The Siemens-IPM way

Defined, practical processes are the basis of every maintenance organization. The people who carry out the servicing and maintenance activities are the supporting pillars of the organization. The "roof" is represented by the right tools and their logical, rigorous application.

Developing a new maintenance organization while simultaneously setting up a new production operation is a less timeconsuming task. In this case, the organization and processes can be implemented from the start in a targeted manner.

Taking over an established maintenance system places greater demands on both the organization and staff. But the objective is the same, no matter what the starting point.

The introduction of tested and verified, standardized processes is the primary

task of our implementation teams. The work and the time required depend on the maturity of the existing processes. The processes to be introduced and/or revised are always the same and are based on ISO 55000. The activities involved in maintenance are strictly bound by DIN 31051. The illustration above shows the main consideration categories, which also occur in ISO 55000, for the processes that need to be developed for effective and efficient maintenance and or for efficient and effective asset management.



Experienced staff ensure the availability of production plants.

# Making maintenance costs transparent

## 3. Outsourcing – for and against

Depending on who you ask in the company about the outsourcing of maintenance, the answers will always differ due to the variety of perspectives.

The arguments that are used most frequently to prevent any further consideration of outsourcing are: loss of knowhow, lack of specialist expertise on the part of the service providers, lack of continuity and any rebuilding of expertise after the end of the contract, giving up control of the maintenance, employees feeling abandoned, higher maintenance costs with outsourcing, and being able to introduce innovations more quickly if the firm's own staff are used. There are also arguments in favor of handing maintenance over to an external service provider. For the outsourcing service provider, like Siemens IPM, maintenance is a core competence. The introduction and adaptation of maintenance processes is a routine operation and strict compliance with these is mandatory. The actual costs of the maintenance become transparent – and on this basis, continuous improvements can be made, and the reliability of the plants can be measurably increased. A complete audit of maintenance processes is carried out at the same time in a wide range of areas, such as management, personnel development and materials management, with all the expert knowledge and experience of a service provider that specializes in this core competence. Outsourcing ensures the long-term stability of plant availability.



### Catalog of criteria for selecting a suitable outsourcing partner

- Corporate decision in favor of partnership
- Define achievable, logical expectations
- Define strategic and tactical objectives
- Determine the actual costs of the trades (functions and processes) to be outsourced
- Define key figures and reports
- Define communication concept with outsourcing partner
- Design handover process
- Develop contract management concept
- Qualification and assessment of possible outsourcing partners
- Develop call for tender
- Define the bidding process

## Making sure that only experienced specialists look after your plants

## 4. Is maintenance a core competence?

How can I determine if outsourcing is a business model for my company? Which steps do I have to take to reach a successful outsourcing result? How do I find the partner that's right for me?

Determining the core competencies of a company is the first step in finding out whether production plant maintenance is one of them. Product development, manufacturing, sales and servicing are often the main areas of a manufacturer's competence. Does the maintenance of the production and auxiliary equipment form part of this? Are the plants in-house developments or were they obtained from OEMs?

Areas of a company like plant security, facility management, caretaker activities, debtor accounting, personnel matters, and salary accounting are often no longer counted among the company's core competencies and are thus outsourced. It is also important to check how many different suppliers provide support to inhouse maintenance departments. Did the need for these support services arise due to a lack of resources, gaps in expertise or even out of habit? What proportion of the current maintenance budget is accounted for by these bought-in services?

#### **Outsourcing – but how?**

Once the corporate decision to work with an outsourcing partner has been made, it is important to define what is expected of the partner. These expectations are in the area of technical expertise, the use of upto-date technologies, the application of best practice maintenance methods such as planned, preventive and status-monitored maintenance, management competence, reliability improvements, and materials management.



### Benefits of a partnership with Siemens

- Maintenance as a core competence
- Effective, efficient and process-driven maintenance management
- Reliable production performance through preventive and status-monitored maintenance (Plant Data Services, Condition Monitoring)
- Cost transparency for maintenance, external services, and spare parts
- Risk minimization through reliability-oriented maintenance strategy
- End of risks to staff (bottlenecks)
- Monthly reporting and key figures
- Integration of current Siemens technology for energy and production efficiency
- Manufacturer expertise in automation and drive technology
- CMMS use optimization
- Health and safety at work and environmental protection as core elements of the maintenance philosophy and quality

# Making sure you can really rely on trust

"As an outsourcing partner, Siemens is available as an expert, reliable contact in every project phase."

Arno Schmitt, Siemens AG, Director Integral Plant Maintenance

### 5. How does an outsourcing partnership with Siemens work?

The first step towards a partnership aimed at professionalizing customer maintenance and asset managements is mutual understanding and creating a basis of trust.

Concluding a contract, mobilization and the success-oriented partnership follow a defined process.

After signing a confidentiality agreement and a Lol, Siemens gains an impression of the current maintenance situation through an onsite maintenance process analysis to evaluate potential. This forms the basis for a bid and for working out a joint partnership agreement containing the corresponding objectives.

Once the contract has been signed, mobilization starts in line with whether the plant is a new one or an existing one. This includes taking on or taking over qualified staff and managers, adjusting and introducing the necessary processes, and setting up and moving into premises in the plant. In addition, establishing supplier management, warehouse logistics, spare parts management, and a maintenance planning system form part of the mobilization. This phase ends with the assumption of responsibility and is made measurable through contractually agreed key figures. The collaboration that follows is characterized on the part of Siemens by increasing plant availability, HSE and quality improvements, effective and efficient maintenance, the introduction of preventive and predictive measures and data analytics, energy efficiency improvements, material and external services management, and regular reporting.

## Adapting the maintenance strategy to business requirements



#### Maintenance performance level

Theoretically, maintenance can be carried out to a point where the availability of the plants reaches a maximum. However, whether this makes sense commercially must be considered, since the work required to reach this maximum involves considerably higher costs. The approach adopted by Siemens is based on a risk analysis which makes it possible to position work required and benefits achieved at a level adjusted to the company objective in the lower area of the total costs curve. This means that optimum technical availability is ensured and costs remain in an economical range.

#### Find out more:

#### siemens.com/ipm

As an outsourcing partner for maintenance and asset management, Siemens ensures the availability of your plants and maximum value added.



Focus on maintenance



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