Competence Center Maintenance

Your expert for industrial and internal maintenance
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“The increasing digital networking of man and machine in the age of Industry 4.0 strengthens the potential of value-adding, efficient maintenance as an important influential factor for the success of the company. Often, however, there is a lack of personnel capacity to implement the necessary adaptation processes in time and to introduce new, digital assistance systems. At this point, we support you as a comprehensive expert across industries in all areas of maintenance management.”

Frederick Birtel, M.Sc.
Head of Competence Center Maintenance
Head of Research Unit Lean Services within Department Service Management
Our services

Corporate strategy for smart maintenance

- The organization and goals of maintenance must go hand in hand with corporate strategy – especially in the transformation to smart maintenance. Together with you, we will first define a target system for your maintenance organization and work out a comprehensive and individual smart maintenance roadmap along six development stages. With the goal of maximizing the value contribution of maintenance, the roadmap actively supports the implementation of your corporate strategy and business objectives.

Maintenance organization

- Receive efficient support in the identification of diverse potentials through an objective determination of the status quo of your maintenance organization (maintenance check). In addition, we accompany you in the evaluation of various options for the redesign of your maintenance organization and the introduction of concepts such as Total Productive or Reliability Centered Maintenance (TPM/RCM) under the aspects of Industry 4.0 and predictive maintenance.

Planing, control, processes and IT

- We support you in optimizing your maintenance processes. With professional process modeling tools, we take a detailed record of your actual processes. Based on an analysis of interfaces and weak points, optimized target processes are developed and measures for implementation are derived. In addition, with our „3-phase concept“ we help you with the neutral selection of an IT system (IPS system) from a variety of providers, which offers the optimal functionalities for your requirements. We also support the introduction of an KPI-based maintenance performance management system.
Spare parts management

The Competence Center Maintenance supports you in recording the current situation of your spare parts network and quantitatively estimates future requirements for your spare parts management. Based on these findings, future scenarios with different numbers and localization of warehouse locations are created. As a result, you get an optimal compromise between high partial availability and low capital commitment.

Use of technology

We are at your side as a neutral partner in the qualified evaluation of the use of digital technologies in maintenance, such as mobile devices. With a customized business case calculation, we work with you to make a well-founded evaluation of the technologies in question and deliver a tailor-made implementation roadmap for your company.

Maintenance strategy

Together, we develop a holistic, life-cycle-oriented maintenance strategy for critical production plants based on RCM and FMEA methodology. After prioritizing and structuring the plant components, a functional and fault analysis is carried out. Component-specific maintenance strategies and suitable maintenance measures are derived. In this context, a profitability analysis is also useful. The result is a maintenance strategy that allows you to take maximum advantage of the potential of Industry 4.0 and the Internet of Things for your business.

Project procedure (example)

- Organizational analysis
  Qualitative analysis of the maintenance areas using the maintenance check
- Process analysis
  Transparency of processes, Use of IT, weak points, etc.
- Data analysis
  Transparency of available data in IT systems used
- Development of measures
  - Consolidation of results,
  - definition of measures,
  - prioritization of measures,
  - identification of quick wins,
  - derivation, implementation
- Implementation of measures
  Project management:
  - drafting project plans,
  - monitoring progress,
  - continuous improvement

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Measures</th>
<th>Implementation</th>
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<tbody>
<tr>
<td>10 weeks</td>
<td>3 weeks</td>
<td>x weeks</td>
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Do you ask yourself any of the following questions?

- How can maintenance contribute to the implementation of the corporate strategy?
- What potential is there in the current maintenance organization and what could an implementation concept for the reorganization of my maintenance look like?
- How good are my maintenance processes, how meaningful are my maintenance KPIs? How can these be supported by IT systems in an economical and user-friendly way?
- How can the spare parts supply be optimally guaranteed from availability and cost perspective?
- Which technologies offer potential to meet the increasing demands on maintenance and how can they be used economically and in line with requirements?
- How can availability in line with requirements be made possible by a maintenance strategy selected specifically for the plant and components?

The Competence Center Maintenance accompanies you as a comprehensive expert in the field of maintenance management and supports you in your challenges and the optimization of your maintenance.

Please contact us: cc-ih@fir.rwth-aachen.de

Other activities

- Free and cross-company exchange of experience between maintenance companies in the Euregio

  ak-ih.net

- Mood barometer of internal and industrial maintenance.

  ih-indikator.de

- Whitepaper “Return on Maintenance – Paradigm Shift in Maintenance through Industry 4.0”

  rom.fir-whitepaper.de
Selected references:

- Bayer
- Bosch
- CFL
- Daimler
- Dralon
- Gelita
- Infineon
- LSG Sky Chefs
- Lufthansa Technik
- RWE
- Thyssenkrupp
- Yncoris

FIR Aachen GmbH
Campus-Boulevard 55
52074 Aachen
Phone: +49 241 47705-0
Fax: +49 241 47705-199
Email: info@fir.rwth-aachen.de

www.fir.rwth-aachen.de
www.instandhaltungsmanagement.de
www.ih-indikator.de