



KONICA MINOLTA



INDUSTRY 4.0 MATURITY ANALYSIS

IIOT ANALYSIS FOR SMALL AND MEDIUM-SIZED BUSINESSES



INDUSTRY 4.0 MATURITY ANALYSIS

Industry 4.0, Industrial Internet of Things (IIoT), condition monitoring, BigData, artificial intelligence (AI), predictive maintenance, cloud services and edge computing — this is just a small selection of the issues surrounding digitalisation that small and medium-sized businesses are now also facing on an increasing scale. Developments in the area of IT are constantly presenting new opportunities to optimise manufacturing processes through the digitisation of the machines and devices used. However, starting the digitalisation process is often difficult. Full order books, endless new customer requests and limited availability of resources mean that for small and medium-sized business in particular, it is not easy to keep up-to-date with the latest developments in digitalisation on the shop floor.

Starting situation

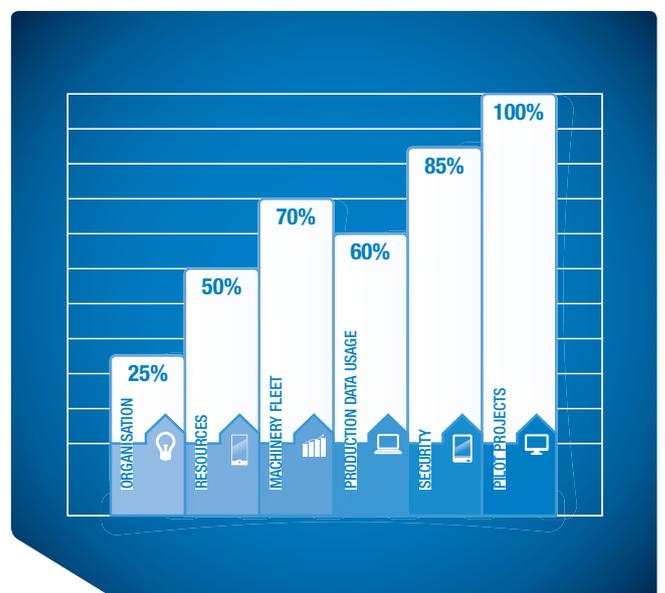
Increasing efficiency in production, maintaining optimum plant utilisation and increasing competitiveness are all tasks that companies must face on a daily basis. Digitalisation can make a substantial contribution to a business in this regard. However, precise analysis is required to identify the areas in which digitalisation solutions will bring real process improvements. The analysis results can be used to make targeted investments in digitalisation, thus avoiding any investment flops.

Maturity analysis

In order to successfully implement targeted IIoT solutions, an accurate knowledge of the machinery fleet, the machine networking and the production processes is required. With the Industry 4.0 maturity analysis, Konica Minolta is offering a standardised procedure for determining the state of your manufacturing processes with regard to digitalisation. Your current manufacturing situation is then also recorded and documented in a structured way. In addition, the maturity analysis enables an identification of existing potentials for the integration of digital technologies in the manufacturing process.

If IIoT projects have already been started—such as pilot projects in selected areas of production—they will be included in the analysis.

The maturity analysis serves as an assessment tool, which forms a basis for selecting the next steps towards introducing optimum IIoT technology. The analysis enables you to select the specific production areas in your manufacturing processes that offer the most potential for using IIoT solutions.



The challenge — analysis and evaluation

For many companies, the challenge is identifying the important production areas where IIoT solutions will improve processes and prove worthwhile. However, these companies often lack the resources required to tackle the subjects of Industry 4.0 and IIoT. Usually, the first step is to select individual sub-processes for use in a pilot environment for initial IIoT solutions. Often, these pilot environments are not pursued following completion of the project, because their results do not represent part of an overall solution, functioning instead as a "niche solution".

In order to ascertain which specific areas of production offer the highest potential for IIoT solutions in your company with low labour costs, it is necessary to determine the actual situation in your company and to analyse current bottlenecks. This information is recorded as part of the maturity analysis. The results of the analysis are incorporated into an evaluation report, which provides an overview of the different levels of the analysis. It provides a comprehensive picture of the current production situation and the relevant units and systems. Possible solutions for overcoming existing bottlenecks or utilising existing potential are also detailed, allowing clear recommendations for future projects and next steps to be defined. Our approach enables a targeted analysis and helps with prioritising the next steps for structured entry into IIoT.

Our services

Together with your specialist departments, our experts analyse the existing production environments. Each of the analysis categories contains a pool of questions, which are used to determine the respective level of maturity in a structured way. The evaluation allows a direct comparison with the desired target status, resulting in a number of recommendations for action, which can be used according to priority as the basis for deciding subsequent IIoT measures. The categories of the maturity analysis include:

- Company: organisation, strategy, resources, objectives
- Production: machinery fleet, data generation, IT and OT network, production data usage
- IT: readiness, data analytics, data integration, information flows, security, pilot projects, systems in use

Your benefits

With the Konica Minolta maturity analysis, you can gain a complete overview of Industry 4.0 and IIoT in your company in just a short amount of time. The results of the maturity analysis provide a clear approach for using IIoT solutions. Based on the evaluation report, you will receive very clear recommendations for action, which can be used to initiate the next IIoT measures as a follow-up to the maturity analysis.

There are a number of benefits to the maturity analysis:

- Our experts analyse the current production situation in your company. No additional employees are required to create the analysis.
- The maturity analysis also records the current bottlenecks in production and the evaluation provides corresponding priorities.
- The analysis identifies current bottlenecks and offers recommendations for action. The implementation of these recommendations is at your discretion.
- The graphical representation of the results of this analysis provides a comprehensive overview of the current production situation.
- The structured methods of the maturity analysis quickly create transparency. By integrating your employees in the analysis process, they will become active participants in forming the improvements for future processes.



Maturity — procedure

The following procedure provides a structured and goal-oriented implementation of the maturity analysis in your company.

- Preparation:
We prepare the maturity analysis for your company in advance. We schedule the interviews, production tour and kick-off workshop and create a suitable questionnaire for you.
- Kick-off workshop:
The first step of a kick-off workshop is about generating a common understanding of the procedure and implementation of the maturity analysis. The kick-off workshop sees an introduction to the methods of the maturity analysis, as well as a discussion about the process in your company. We then begin interviews with selected staff in various areas, documenting both these conversations and the findings from the visit.
- Evaluation:
When the interview period is completed, the findings from the interviews are evaluated and summarised. These will be assessed and compiled in the evaluation report. Recommendations for action are generated in addition to the results.
- Findings workshop:
In the findings workshop, the results of the maturity analysis are presented, the recommendations for action are discussed and, if applicable, further measures are reviewed. You will also receive a meaningful final report.

