

Industrie 4.0: Smart Services

Manufacturers of drives and automation systems now offer services that span the entire life cycle of products and systems. For users and operators, this increases the safety, availability and productivity of the systems. Carefully selected services pay off for companies over the entire life cycle of industrial machines and plants.

Industrie 4.0 is driving the digitalisation of products, processes and services. Traditional services are being combined with internet-based services to create innovative smart services that are both flexible and relevant. This is giving rise to fundamental changes for the industrial environment of factory automation and process automation. Smart services with digitised and networked products, processes and services not only lead to a more efficient production, they also optimise complex value chains.

This creates the potential to increase the availability and productivity of industrial machines and plants. The future implementation of these Industrie 4.0 smart services will sustainably support the competitiveness of factories and plants.

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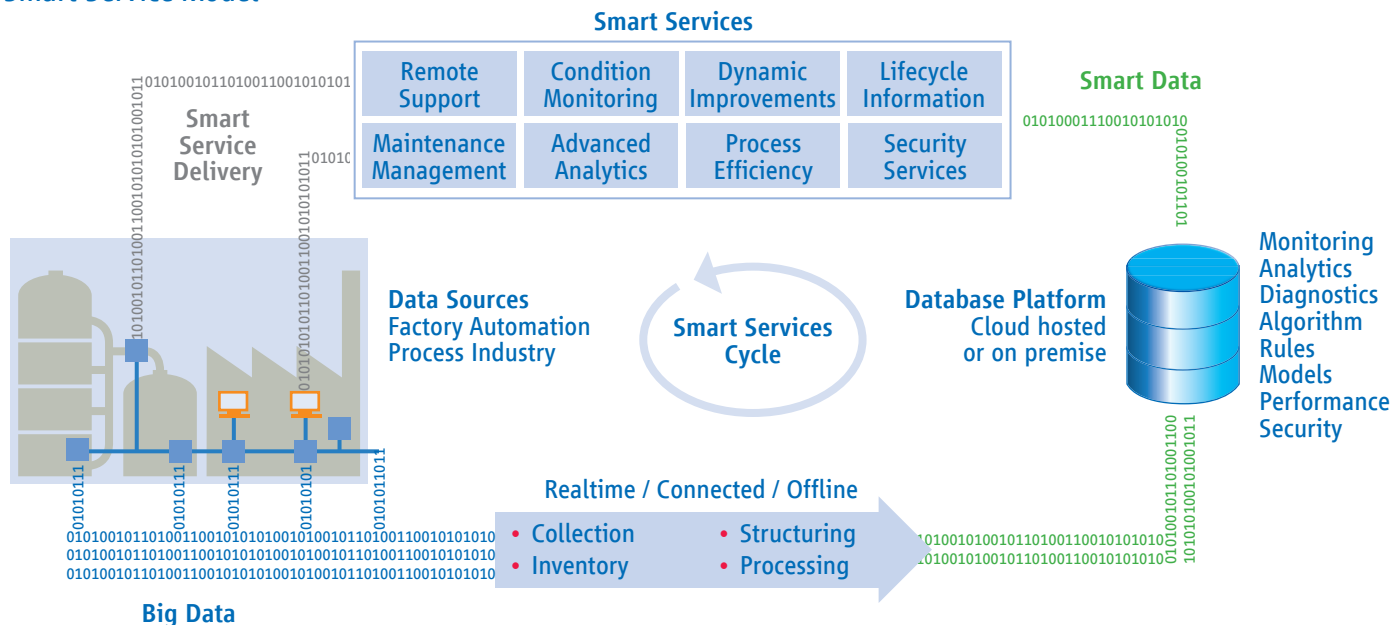
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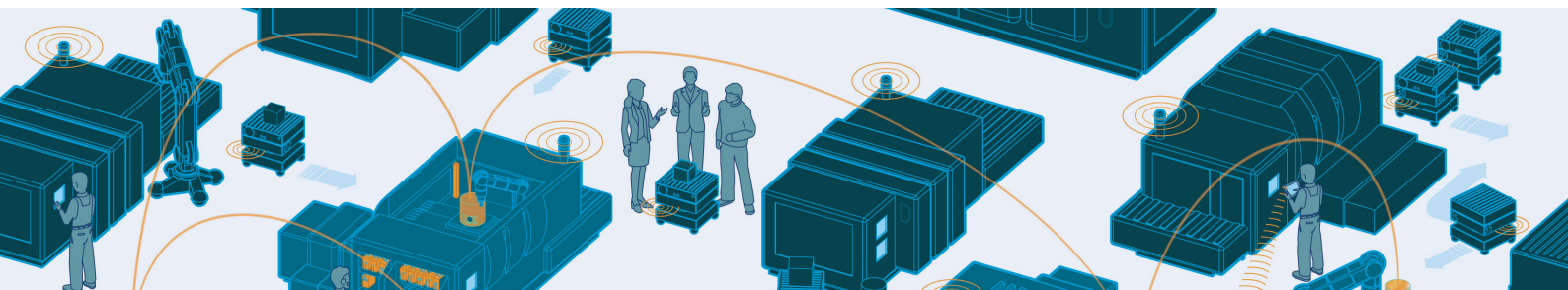
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Smart Service Model





Use cases

Information on product status supports condition-based and process-oriented maintenance activities

For a specific installed equipment base, all product status information such as product and spare part availability and maximum repair and calibration periods are assigned to maintenance requirements in a web-based portal. This information is stored in the equipment manufacturer's database.

A permanent online connection between the equipment portal and database ensures timeliness of all information. An analysis tool continuously links maintenance requirements with the customer's process-relevant data and stores the results in a matrix. Depending on the resulting overall evaluation of the equipment (maintenance requirements vs. function in the process) previously defined maintenance activities such as the replacement of a component can be initiated immediately.

In addition, medium-term activities such as the optimisation of the spare parts management or a reduction of the type variety within the installed base can be derived from the analysis.

Smart services in logistics increase efficiency

The high shipment volumes experienced by logistics centres require highly efficient and smooth-running processing in order to achieve economic efficiency.

The use of intelligent sensors means that extensive data and image material can be used for early detection of possible transport interruptions as well as for the optimisation of individual process steps. Specific software tools are used to perform big data analysis by means of links and corresponding algorithms to generate outstanding benefit. The connection of systems and sensor data as well as parcel images not only enable system monitoring in real time, but also downstream diagnosis and evaluation of the state and performance of the entire system.

In logistics, smart services create the conditions for validation of the content and size of a package as well as minimising the risk of damage or loss, thereby contributing to the optimisation of a complex value chain.

Further information
on industry services:
Guidelines Industry
Services online:
www.zvei.org.