# How customer platforms expand service and after sales in mechanical engineering

from Vanessa Kluge, Product Manager Digitalization at Kontron AIS GmbH

Many machine manufacturers still face a number of obstacles when it comes to new business models and services. Digital customer platforms such as EquipmentCloud® help with implementation by bundling data from many sources, enabling more efficient cooperation, and increasing both customer satisfaction and service revenue in mechanical engineering.
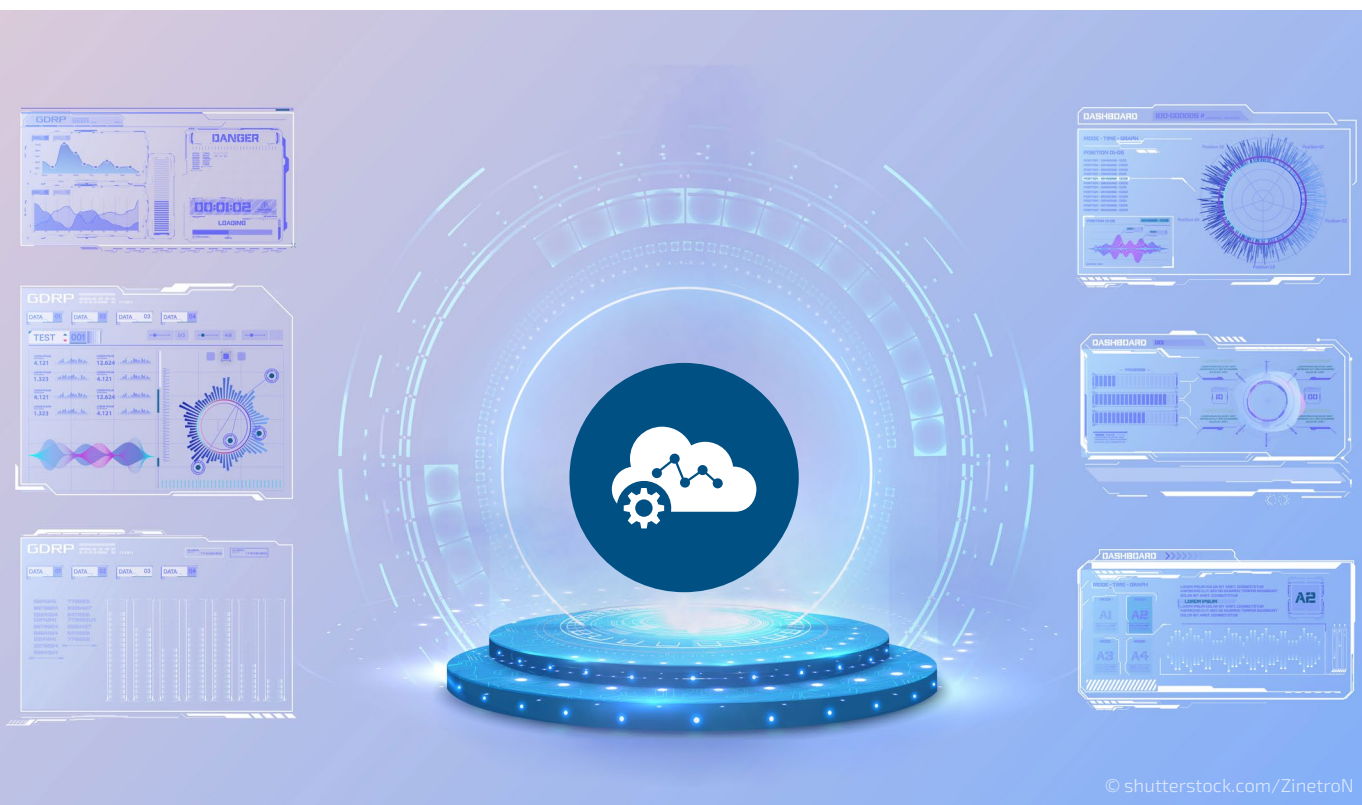
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It is quite clear that most companies are aware of how important it is to evolve business models towards digital services. At the same time, this is precisely where the challenge lies, because the focus is usually still on being able to sell technically innovative new machines. Many machine manufacturers find it difficult to combine the highest level of engineering skills with a scalable service offering that goes beyond pure ad-hoc support and traditional spare parts business. Although there is a general vision of digital services, such as remote maintenance and smart or predictive maintenance, each organization needs to define the topic for itself individually. That is one of the reasons why companies find digital services so difficult to implement. It is also important not to get held up with IT solutions that involve complex adjustments and a jungle of interfaces. Implementing a digital customer platform that is already tailored to industry requirements, can significantly reduce the otherwise complex integration of a wide variety of data sources and processes. »

Removing the obstacles

From a practical standpoint, it is worth involving people from cross functional departments such as marketing, development, after sales, service, and product management at an early stage of strategy development. The management of the company also need to give this topic their full support. The biggest difficulty, however, is often understanding exactly what pain points one's own customers have. The better a digital service solves a customer's problems, the greater their willingness will be to spend money on it.

One thing is clear: Despite the demands of day-to-day business, there needs to be time to take a holistic view of the entire machine life cycle, from development and production to end of life recycling and disposal. It is important to consider which points of contact and interactions with customers already exist and are still possible. In order to identify potential added value, it is necessary to analyze where repeat problems can occur. It is these interfaces that contain the best opportunities for services that optimize or extend the life cycle and increase throughput, output, and overall equipment effectiveness (OEE).
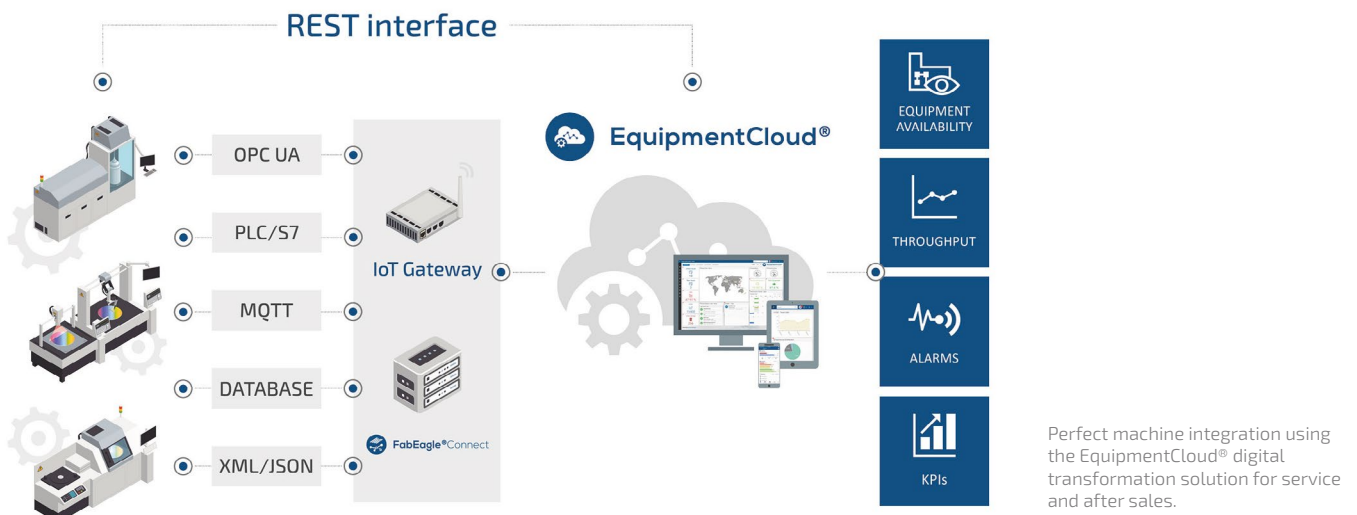
Support is up to 70 percent faster

Digital customer platforms make it much easier to implement new business models by providing a holistic view across departmental silos and bundling information in a standardized way. With subscription model cloud-based solutions, there is also no need for high entry-level investments, as no on-prem infrastructure is required and the work required by an inhouse IT department remains manageable.

With a customer platform based on the digital transformation solution EquipmentCloud® from Kontron AIS, many companies have been able to improve customer satisfaction by more than 50 percent and achieve 70 percent faster support. This is also because their customers no longer have to wait for information, they only have one point of contact for their questions and get more benefit from the manufacturer's expert know-how. Some users generated 25 percent higher spare parts sales, because if they are able to offer high quality spare parts management, their customers no longer source it somewhere else. In some cases, the aftersales business increased by more than half.

Bundling many data sources

Because the machines are not only in different life cycle stages, but also feature varying levels of technology, it must be possible to integrate a variety of industrial interfaces when collecting data. Many machines are custom-built and there are often long-term contracts for common control systems. There are therefore a number of factors that make uniform interface coordination difficult. An important task »

Perfect machine integration using the EquipmentCloud® digital transformation solution for service and after sales.

for the development departments at machine manufacturers today is therefore to do the necessary preparatory work for better integration. While old systems can be upgraded using retrofits, new systems should always have IoT devices installed to support services such as remote maintenance. Customer platforms can often be expanded with additional modules that increase their range of functions and form an important competitive factor as a result.

Using graphical programming interfaces such as the open-source tool Node-RED and integration frameworks such as FabEagle® Connect for configuring a wide variety of industrial interfaces, data integration into cloud solutions can be significantly simplified or even automated. The translation of interfaces into the REST web standard can therefore be implemented just as flexibly as the arbitrary connection of data

from third-party systems such as ERP, MES, databases, or PLC systems. For data security reasons, it is important that control systems are not accessed directly, but that the data first flows into a secure repository. In order to achieve high quality results, it should be defined in advance which data is actually relevant and how it must be preprocessed. This is particularly important where predictive analyses or visual quality inspections are to be carried out using AI algorithms. There are now inexpensive sensors for almost all measurement tasks, while IoT devices ensure secure data transmission.

Key facets of digital customer platforms

Flexibility should be the decisive feature when choosing solutions: Customer platforms thrive on the fact that data from a wide variety of systems and sources can be brought together as a single source of truth, »
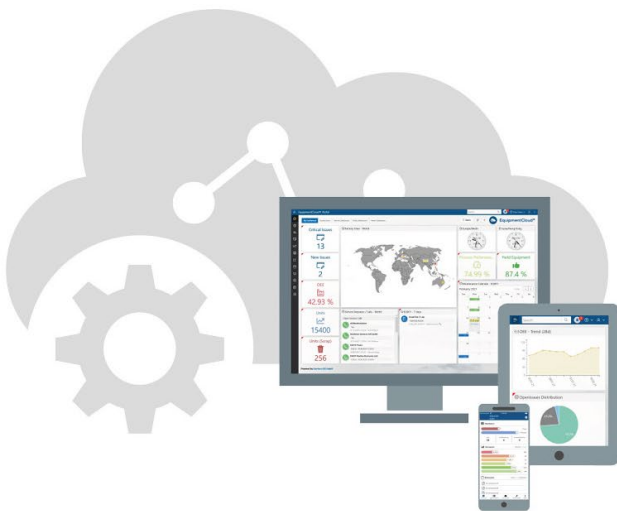
An important requirement for a digital customer platform is the flexible connection of third-party systems to bundle data in one location and process data bidirectionally.

ERP SYSTEM

TICKETSYSTEM

SPARE PARTS MANAGEMENT

FILE SERVER

DATABASE

AR/VR REMOTE SUPPORT
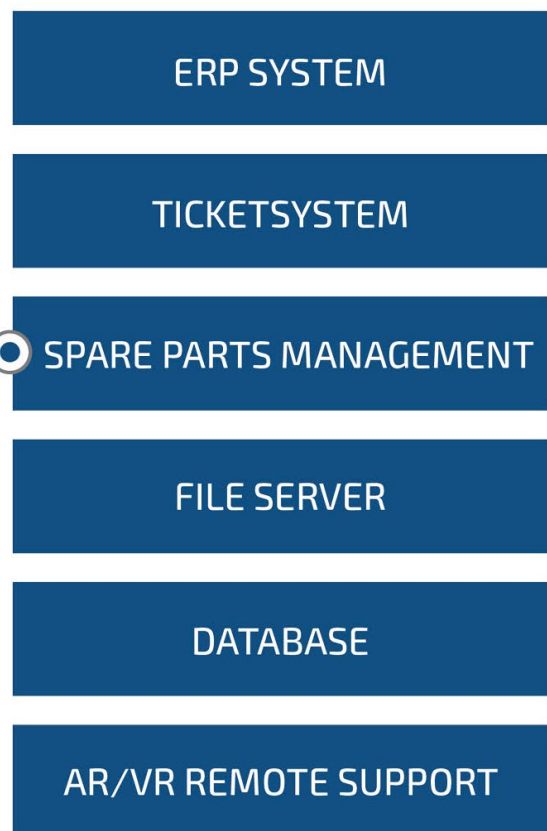
including information from existing systems such as ERP, CRM and ticket solutions that enhance the platform. For example, spare parts may be listed in the ERP, while their construction drawings are stored in PDM or PLM systems. Note: To avoid redundancies, data should only be acquired once, and changes should be automatically transferred to the systems affected.

The best method is generally to bundle information ranging from serial numbers and documents to machine data analyses centrally around each machine. Direct access around the clock helps everyone involved save time. This allows customers, partner companies, service technicians and sales to work together in one place and have all information at their fingertips. Easy customization is also important so that users can find out about KPIs at a glance from dashboards and navigate to the information they need as quickly as possible. Platforms should always be available on mobile devices such as tablets and smartphones. A practical role concept as well as secure user admin and access authorization are also decisive for successful deployment. Multilingual offerings ensure efficient cooperation between the manufacturers and machine operators, as well as

with service technicians. Hosting needs to be GDPR-compliant, the data should be stored in encrypted form and transmitted with end-to-end encryption.

Support is essential

Since medium-sized mechanical engineering companies usually do not have the development capacity to set up customized solutions, it is worth using ready-made applications, such as EquipmentCloud®, which was developed specifically for machine manufacturers. With broad project experience, Kontron AIS provides support all along the way, from removing the initial obstacles, through strategy and realization to the final implementation and rollout of smart services to the customer. Identifying pain points, specifying use cases, and developing digital business models can usually be covered in joint workshops. As part of a proof-of-concept (PoC), the first steps are then tested with a dedicated project team in close cooperation with an initial pilot customer and individual machines. This way, the machine manufacturer receives early and continuous feedback on the planned smart service from the machine operator, so they can experience the added value in real time and generate real demand. This is followed by a gradual rollout to other departments at the machine manufacturer, »

The EquipmentCloud® digital transformation solution for service and after sales enables cross-device use and avoids media disruptions.
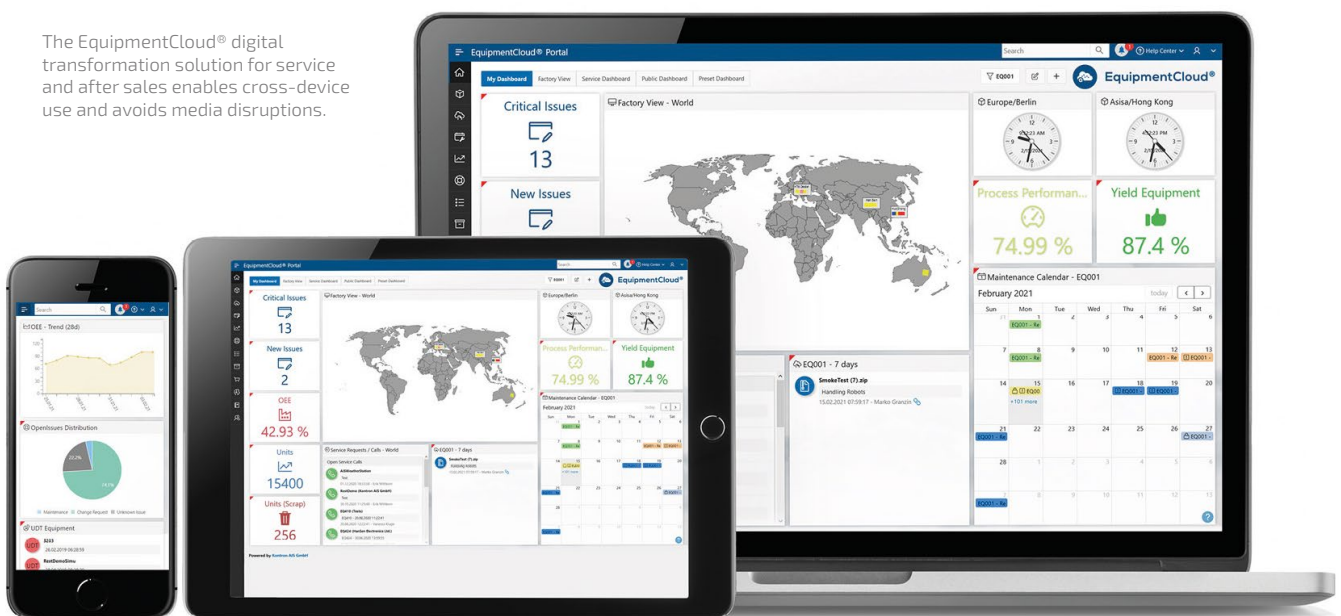
as well as the connection of more machines at the pilot customer's system, while bringing additional factory owners into play. Kontron AIS customers benefit in the long term from the exchange of information and experience between users within the growing user community and network of experts.

A survey of around 30 Kontron AIS customers indicates the priorities: 75 percent want to use a customer platform primarily to handle service and support cases, 58 percent want to use it for a spare parts web shop. For at least half of them, the function as a collaboration platform for customers, employees and partner companies is particularly important. A need for exchange of information and practical experience is definitely there and shows that coordination and preparation times can be significantly reduced in this way.

Knowledge management:
countering the shortage of skilled workers

For many companies, the transfer of knowledge via a customer platform is also an opportunity to better deal with both employee fluctuation and the rapidly increasing shortage of skilled personnel. Service and maintenance teams in particular are severely affec-

ted by the fact that the baby boomer generation will retire over the next few years. Empowering customers to handle the machine or system correctly takes the pressure off their own service technicians, especially with reoccurring problems. At the same time, a knowledge-based platform provides a good basis for absorbing the specific knowledge of retiring professionals and keeping it available. Here, it is worthwhile finding people who enjoy passing on their knowledge, for example through step-by-step instructions or online tutorials. This supports the exchange of knowledge between internal departments and can also be used to assist customers through additionally bookable or license-based academy training modules.

In particular, platforms boost cross-selling and up-selling by showing customers clearly which additional services are available and which other products would be suitable. Machine manufacturers increase their service efficiency and are often better able to differentiate themselves from the competition, improve customer experience and use machine data for further processing: for example, to tap into new service potential, offer condition-based maintenance and incorporate findings into their inhouse R&D team. ■

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