



The future of parts procurement

Why Online Manufacturing is crisis-proof,
high-quality and efficient



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01 Introduction

Globalization and digitalization have sharpened competition in the manufacturing sector. Many manufacturing companies are facing the challenge of **managing the increasing complexity of products and delivering custom requests at high quality within ever shorter times**. In order to meet the requirements, many companies are searching for external solutions and opt to purchase production parts.

When outsourcing production parts, both customized single parts and small and large series are requested. Optimizing the corresponding procurement processes represents a key task for purchasers of production parts.

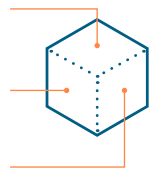
As a state-of-the-art concept of procurement processes, **Online Manufacturing** is based on digitalization, automation and networking. A broad range of network partners, production techniques and surface treatments are the fundamentals needed for the „procurement of the future“.

Online Manufacturing

Digitalization

Automation

Networking



Companies benefit from this innovative procurement strategy for production parts through:

- ✓ Considerable potential for savings
- ✓ Added efficiency
- ✓ Improved delivery reliability

Especially during economic crises such as the coronavirus situation, **traditional procurement processes reveal huge disadvantages** such as dependence on suppliers, disruptions in supply chains and delivery bottlenecks, potentially having a huge impact on operations. However, parts procurement via an Online Manufacturing network ensures stable procurement processes thanks to the rapid adjustment to current circumstances such as reallocating production capacities away from the businesses and regions currently affected.

In summary, it is evident that the digitalization, automation and networking of procurement processes are rapidly gaining importance, with no alternatives on the horizon.

02 A market observation of the manufacturing industry

The parts supplier market currently consists mainly of traditional contract manufacturers. A contract manufacturer is an external manufacturing company that offers third-party production of components. This includes services such as CNC milling and turning, wire and electrical discharge machining as well as sheet metal forming. Third-party production is used, for example, when a manufacturing company either has no own production capacity or its capacities are exhausted. As the second major „conventional“ form of parts procurement, in-house production, however, is associated with disadvantages such as high acquisition costs for machinery, regular servicing costs and a persistent lack of skilled workers.

The parts supplier market in Germany is relatively large and includes many small family businesses. The German Supplier Industry Association (ArGeZ) alone represents 9,000 supply companies with over 1 million employees that generated revenue of 244 billion euros in 2019.

Along with 13 other associations for steel and metalworking, the German Turned Parts Industry Association (VDDI) is organized in the Association of the Steel and Metal Processing Industry (WSM) via the Association of Metal Products and Related Industries (FMI). VDDI members include 140 businesses with over 15,000 employees. Most of them – currently 100 – represent traditional turned parts manufacturers and the majority are small and mid-sized family-owned companies with strong connections to their region. The current situation in parts supplies is thus shaped by traditional patterns.

German Supplier Industry
Association (ArGeZ)

9.000

Supply companies

1 Mill.

Employees

244 Bill.

Revenue 2019 (in Euro)

Manufacturers who rely on a certain supplier for a long period are at risk – they voluntarily become dependent on them, thus relinquishing flexibility.

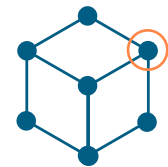


These companies often source from their regular local manufacturer. If this manufacturer suddenly becomes unable to deliver, the entire production process may come to a standstill. While large companies are usually more flexible and maintain a pool of qualified suppliers, their strict purchasing guidelines coupled with complex auditing processes often hamper the efforts of purchasers. Communication also still tends to follow traditional patterns in many places. Email and phone are still the most common means for coordinating between customers and suppliers. Placing orders or transferring encrypted data via upload to a website or ERP interface is still not standard practice.

Modern developments such as artificial intelligence and robotics create new dimensions and sustainably change production processes in the industry.

The fusion of the real and virtual world results in innovative solutions for parts procurement:

Flexible Online Manufacturing networks.



During the coronavirus crisis, the relevance of **Online Manufacturing as a crisis-proof form of procurement** has already attracted more attention – this trend is likely to continue and become even stronger in the future. For conventional contract manufacturers, this development means that they will be overtaken or even go out of business if they do not adapt to changing market demands.

But even **for conventional contract manufacturers, Online Manufacturing represents a big opportunity**. As reliable manufacturing partners, contract manufacturers with free capacities regularly receive selected inquiries that match their respective strengths. When capacity utilization is high, production networks may serve as an extended workbench for these companies.



From an economic aspect, Online Manufacturing leads to a more efficient utilization of machine capacities, thus preventing market imbalances.

03 The future of parts procurement

The market served by the manufacturing sector requires an increasingly diverse range of products. For manufacturing companies, the **systematic management of a growing number of components used in production thus becomes a strategic necessity**.

The stricter requirements lead more frequently to outsourcing in order to protect the company's own capacities, meet delivery dates or remain able to continue production during a crisis. The tendency towards outsourcing encouraged by the digital transformation has led to the emergence of more third-party manufacturing companies as component suppliers which are either conventional contract manufacturers or Online Manufacturers.

Flexibility, a high level of precision and fast delivery times have become indispensable for the production of custom components. Conventional contract manufacturing is not always capable of meeting these new demands – for example due to a lack of free capacities or a too narrow production range. This traditional kind of procurement may have another disadvantage – the long-term commitment to a certain supplier limits the company's flexibility and leads to dependence.

Problems in conventional contract manufacturing thus include:

- ⊖ Long delivery times
- ⊖ Lack of free capacity
- ⊖ Limited production and material range
- ⊖ Delays and missed deliveries
- ⊖ Service and quality defects



The process optimization required today does not start only during production, it is already implemented in the procurement process. **Digitalizing, centralizing and automating processes in order to reduce costs, increase productivity and thus ultimately remain competitive are the challenges here** as well.

Online Manufacturing – Purchasing of the future

The concept of Online Manufacturing is a remedy for many problems and a promising solution for the future. **Needs-based production or supply of components opens up new degrees of freedom.** Customers can efficiently drive their own digital transformation without being affected by capacity bottlenecks and disproportionate personnel involvement.

The use of an Online Manufacturer changes the purchaser's scope of duties. Projects no longer have to be split up according to production techniques and assigned to different manufacturers. The approach also eliminates the need for contracts with different partners for handling complex multi-part production sequences such as CNC processing followed by surface finishing. Overall, the purchaser is relieved of a large portion of former tasks such as searching for and qualifying suppliers and logistics work.



Always ready for production and delivery – even during a crisis

Online Manufacturing supports the preparation of the **ideal proposal** for every request – tailored to meet the customer's needs. With **AI-based supplier matching**, the **optimal manufacturer can be selected from the network, taking factors such as best quality, fastest delivery time and lowest price** into consideration.

The advantages of Online Manufacturing are particularly evident in the coronavirus crisis as this modern form of procurement is shock-resistant. **Production networks can react much more flexibly and reliably to new developments** than individual manufacturing companies.

Companies that use Online Manufacturing always maintain their production capability. They benefit from:

- ✓ **Stable supply chains**
- ✓ **Fast delivery times**
- ✓ **Guaranteed availability**
- ✓ **Custom proposals**

This allows companies to **continue their operations** in every situation. The closure of a supply manufacturer does not result in missed deliveries because capacities can be flexibly reallocated in the manufacturing network. The risks of missed and delayed deliveries are minimized as far as possible using the network approach and supply chains are preserved even during a crisis.

In the modern form of procuring made-to-order parts via an online network, streamlining the order process accelerates the **company's own digitalization efforts and improves overall efficiency. Combined with high quality, this results in an important competitive edge.**



»As the first Online Manufacturer, our goal is to facilitate **state-of-the-art procurement of production parts** for our customers in the digital era.«

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04 Case study – Online Manufacturing at Parker Hannifin

In many industrial and manufacturing companies, the procurement of components is a complex process due to operational structures and special requirements. Materials, processing, execution and delivery times are essential and time- and cost-consuming factors that must be well planned and usually involve many different resources such as personnel and costs.

As a leading supplier of drive and control technology, Parker Hannifin relies on short procurement times and precision workmanship of special components. While in the past, such components were manufactured as prototypes, which was time-consuming and involved many employees, in 2019, the company made fundamental changes.

Parker Hannifin commissioned Online Manufacturer FACTUREE to produce special components for assembly devices in their engineering department:

The production order

- ◆ Brass components (CuZn39Pb3)
- ◆ Seven items, 50 units each

The requirements

- ✓ Advanced turning and milling work
- ✓ Tolerances: $\pm 0,02$ mm
- ✓ Additionally: extremely close fits

The complex manufacturing process also involved special surface treatments. In the first step, the surfaces were copper-plated, then nickel-plated in a subsequent step. Finally, the surfaces were partially polished and laser engraved.



Parker Hannifin

Parker Hannifin Corporation is a US engineering company that was founded by Arthur L. Parker in 1917. The company is listed on the S&P 500 and has been traded on the NYSE since 1964 (PH).

Source: Wikipedia

Parker Hannifin opted for FACTUREE because the company has an extensive production network. FACTUREE's many manufacturing partners ensure free capacities at any time and guarantee universal production. The Online Manufacturer was able to **deliver the components even before the agreed delivery date**, despite the complex manufacturing process involving high quantities and tight delivery deadlines.

Thanks to the advantages of rapid order handling, personal customer service and very short delivery times, Parker Hannifin was able to efficiently drive its own digital transformation without being affected by capacity bottlenecks and disproportionate personnel involvement.






[Read the complete case study](#) 



FACTUREE — The Online Manufacturer

Berlin-based cwmk GmbH operates under the **FACTUREE brand name as Germany's first Online Manufacturer** and facilitates state-of-the-art procurement of production parts for its customers. FACTUREE boasts a wide production range, short response times and supplies custom components on schedule.

FACTUREE has customers in the following sectors:

-  Machine and plant engineering
-  Medical technology
-  Robotics
-  Automotive
-  Aviation and aerospace

Satisfied customers include leading industrial companies, small and mid-sized companies, research institutes and universities. **FACTUREE serves customers in all of Europe and operates mainly in the German-speaking countries.**

05 The parts procurement process at FACTUREE step by step



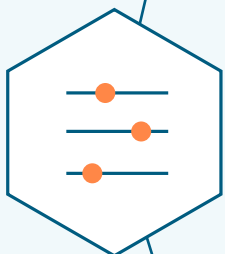
Easy request for proposal

Customers have several options for requesting a proposal. A very convenient way is FACTUREE's user-friendly form at the www.facturee.de website. Here, customers can upload encrypted 3D models or technical drawings of the parts to be manufactured. Conventional email is also an option for making a request. And if there are any questions, the FACTUREE phone customer service can provide support. Every customer is assigned its own customer service agent when the request for proposal is made.



Fast, reliable proposal

When FACTUREE has received the request, the proposal is prepared in just a short time. It is generally sent the same day, but guaranteed within 48 hours. FACTUREE is able to provide express proposals due to a high degree of automation, for example when reading and classifying the CAD files. An additional review of the proposal by an engineer ensures a reliable calculation despite the speedy process.



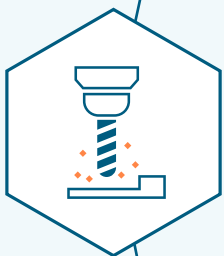
Customized proposal by adjusting the delivery period

The proposals are tailored to precisely meet the customer's needs. For example, greater leeway in the delivery times gives the customer the option of selecting from a larger pool of production partners; this competition results in lower prices that are passed on to the customer. For projects with a tight deadline, the delivery time can be shortened even more in many cases.



Engaging the ideal partner in the network

When awarding a contract to a production partner, FACTUREE uses its extensive production network, currently with more than 500 production partners with approx. 6,000 machines, guaranteeing that there are always free capacities and short delivery times. Digitalized processes facilitate efficiency and speed in the selection process. FACTUREE uses AI-based supplier matching to ensure the selection of the most suitable manufacturers for each project. However, FACTUREE is the sole contract partner during the entire production process.



Wide range of materials and processing options

During actual production, a large range of materials and processing options are available, including surface treatment and finishing. In addition to CNC turning and milling, the services offered include sheet metal treatment such as laser cutting and CNC bending and various 3D printing methods and surface technologies. At FACTUREE, prototyping projects (from a quantity of 1) can be executed as well as small and large series production. Thanks to this huge range of services, even complex requests with varying production techniques and surface treatments can be carried out by a single contract partner.



Quality assurance and confidentiality

Before being accepted in the network, all partner companies go through a multi-stage auditing process in which first the production range is reviewed and then the company's respective strengths checked. To ensure the confidentiality of customer information, FACTUREE also concludes strict confidentiality agreements with all production companies. ISO 9001 certified data-driven quality management guarantees the consistently high quality of the components. Defects and complaints are systematically prevented from the start by the smart selection of a suitable production company.



Prompt delivery

Delivery is possible after only 9-12 working days by express shipment free of charge – and not only within Germany. FACTUREE has a steadily growing number of customers in other European countries. The free delivery of the goods across Europe is climate neutral because – in cooperation with South Pole, a developer of sustainability projects – all emissions from shipping are completely compensated.

»FACTUREE brings the
speed of the digital world
to production.«

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06 Conclusion

Online Manufacturing is gaining speed and is proving more and more to be a better alternative to conventional contract manufacturing. It supports sustainable efficiency gains and gives companies an important push towards Industry 4.0. Conventional contract manufacturing will be successively phased out, opening up new opportunities for small manufacturers.

With its network concept and strict selection procedures for production partners, **FACTUREE** provides its customers access to a wide range of highly qualified production capacities. **Thanks to the Online Manufacturer's state-of-the-art approach to procuring production parts, manufacturing companies can eliminate dependence on individual suppliers.** End-to-end digitalization and automation of the ordering process via an online network lead to greater efficiency, which combined with high quality represents a **decisive competitive edge.**


Would you like to benefit from state-of-the-art procurement processes?
Please contact us for more information.

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