HALTER
CNC AUTOMATION

COVID-19

THE CHALLENGES OF THE MANUFACTURING INDUSTRY

JUNE 2020

WHAT IMPACT HAVE CNC COMPANIES SEEN AND HOW DOES ROBOTIZATION INCREASE THEIR FLEXIBILITY?

The COVID-19 measures will have an impact on the activities of the global manufacturing industry for a long time to come. After the initial shock of the (mandatory) closures, companies quickly switched to restarting production. A number of companies are already looking beyond the corona crisis: What lasting changes will there be in supply chains, the competitive field, and the way of working? Can robotization make manufacturing companies more flexible and agile?

During the lockdown, HALTER CNC Automation presented these and other questions to companies in the machining industry – both customers and non-customers. In some countries we were simply too early: the strict lockdown there led to company closures, resulting in either no response or a low response rate. In other countries, such as Germany, the Netherlands, the United Kingdom and Italy, manufacturing companies did respond. Behind each of these companies there are many more manufacturing companies. Therefore, the results can be seen as an indication of how companies have been affected by the COVID-19 measures and how they expect to adapt to the new reality.

This report should serve as both a benchmark to compare your own company with peers in the sector as well as a source of inspiration to prepare yourself for the future. Almost all participants agree that this will be a future that looks quite different for the manufacturing industry, but also a future that offers opportunities. At HALTER CNC Automation, we want to help machining companies seize these opportunities with our smart robot technology to get more out of their CNC machines.

SUMMARY OF THE RESULTS

Who took part?

In the Netherlands, Italy and the UK, it was mainly typical SMEs that participated in the survey. These are companies that usually employ up to 50 people and about 10 to 20 machines. They are active in the mechanical engineering industry, aerospace industry, automotive sector and general supply. In Germany the profile is slightly different. Some 53% of these participants have fewer than 50 employees; 70% have a maximum of 20 CNC machines. However, almost half of the participants have more than 50 employees, of which almost a quarter even have more than 150.

How did they invest in 2019?

In terms of investments, the answers vary considerably. That the current crisis has come as a complete surprise is shown by the fact that the participants have invested heavily in 2019. This happened the least in the Netherlands (60% have made investments in the last 12 months), followed by Italy with 75%, Germany with 85% and the UK with 100%. In these last three countries, 40% of the investment budget in 2019 has gone toward additional CNC machines. In the Netherlands, this percentage is 11%, which is significantly lower. On the other hand, more of the Dutch companies have invested in automation (22%), R&D (22%) and staff training (33%). In Germany, the main European market for CNC technology, only 17% of the investment budget went to automation last year.

The impact of COVID-19

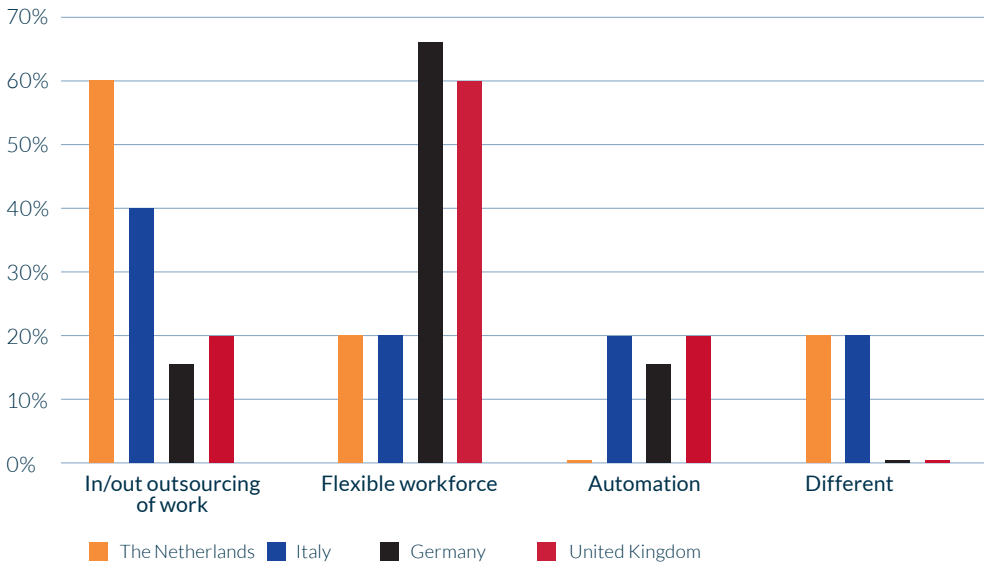
The direct impact of the COVID-19 measures can be measured in various ways. First of all, we can look at turnover. Only a small number of companies said that they have not seen a decrease in demand (the Netherlands 20%, Germany 8%). For a considerable number of companies, the drop in demand was more than 50% (in the UK 75%, in the Netherlands 40%, in Germany 33%). Companies also indicated that they have been seriously affected by government measures to combat COVID-19, such as social distancing. Germany is the positive exception to this: only 17% said the impact is quite serious and 33% said they have been only slightly affected. In Italy, all the participants said that the impact is severe. These differences can be explained by the variation in the degree of restrictions imposed in these countries.

> MANY COMPANIES SAW A DROP IN DEMAND OF OVER 50% DUE TO COVID-19

Medium-term effects

There is no doubt that the current crisis will have an impact in the medium term. The COVID-19 situation is forcing manufacturing companies to become more flexible. Most entrepreneurs in the four countries agree on this (ranging from 75% in the UK and 67% in Germany to 60% in the Netherlands and 50% in Italy). The majority of the participants said they want to achieve this with flexible personnel. In Germany, 65% see this as the solution for more flexibility; in the UK it is 60%; in Italy and the Netherlands only 20%. In the latter two countries, 60% of the entrepreneurs see more benefit in out- and insourcing to respond flexibly to changing market demand. Only a minority of the participants (about 20% in all countries) mentioned automation as the solution for more flexibility.

How do you think you will be able to respond flexibly to sharp falls in demand or, on the contrary, sharp increases in demand?



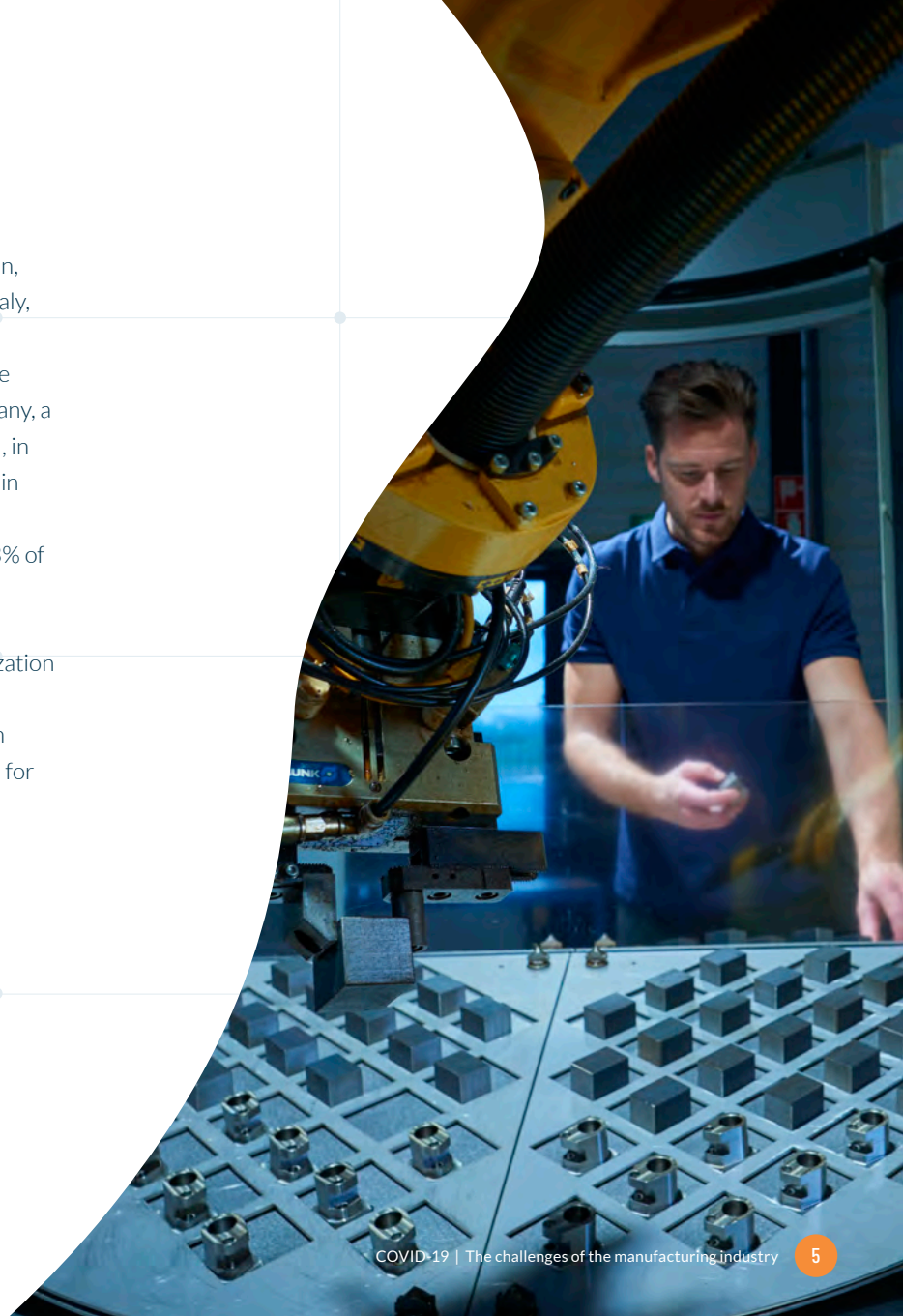
Automation as a means of increasing flexibility

When asked if they agree that automation provides more flexibility, increases scalability and simplifies the production process, while keeping costs low, half of the participants in both Italy and the Netherlands replied that they do not agree with this statement. In Germany, the percentage is 33%, considerably lower. Of these German CNC companies, 50% does agree with the statement. In the UK, half do not know, while a quarter agree and another quarter disagree. Although many of the companies expect to increase flexibility with a flexible pool of employees, none of them expects an increase in the number of employees this year.

Do they still want to invest?

The study also asked the participants about their willingness to invest. About 25% resolutely said they will not invest in 2020. Germany had the largest percentage of companies that do want to invest (50%), while in other countries this fluctuated between 20 and 25%. When asked what they intend to invest in, companies put machines at the top of the list. In Italy, for example, half said that they want to buy new machines when they invest; in the Netherlands the percentage is 40% and in Germany 35%. In Germany, a similar percentage is going to invest in automation, in the Netherlands this percentage is 20% and 25% in Italy. Regardless of this year's plans, when asked whether robotization is being considered at all, 73% of the companies in Germany responded positively, compared to between 20 and 25% in the other countries. The main reason for investing in robotization is for metalworking companies to increase the efficiency of their CNC machines; 38% of German companies indicated this reason, while 19% opted for automation because of the lack of professionals.

> 38% OF GERMAN COMPANIES SEE INCREASING MACHINE EFFICIENCY AS THE MAIN REASON FOR ROBOTIZATION



Importance of robotization for employment

Discussions regularly appear in the media about the impact of automation on employment. Some claim that robots are taking jobs away from people. The metalworking companies in this study think differently about this. This idea is rejected by 58% of the German respondents, as well as 60% of those in the Netherlands. In Italy and the UK, however, 50% and 75%, respectively, think that robotization is at the expense of employment. Many German (50%) and even more Dutch (80%) companies see robotization as an opportunity for employees to further develop themselves. In addition, German companies in particular (67%) think that without CNC automation they will fall behind the competition as a metalworking company. In Italy, opinions are divided on this point; in the Netherlands, 20% agree with this statement.

> **ROBOTIZATION OFFERS EMPLOYEES OF METALWORKING COMPANIES THE OPPORTUNITY TO DEVELOP FURTHER**

HOW TO PROCEED?

> **AUTOMATION IS THE KEY TO SUCCESS IN THE POST-CORONA ERA**
>
> **Wouter van Halteren, CEO, HALTER CNC Automation**

The results of the study show that machining companies are affected to varying degrees by the COVID-19 measures. A large majority of companies are expecting less work in the coming months. “This is mainly the short-term effect,” says Wouter van Halteren, founder and CEO of HALTER CNC Automation, “The real change brought about by this crisis will be a further increase in pressure on series size and delivery times.” Manufacturing companies will have to adapt even faster to changing circumstances.

In terms of flexibility, Wouter van Halteren distinguishes two developments that have been around for some time, but that are being accelerated by the current situation. “Companies find that they must be more flexible because delivery times are getting shorter and series smaller. Therefore, they have to switch more often to other products.” The second form of flexibility is the ability to react quickly when demand for a product increases. Recently this happened when supply chains were interrupted due to some countries being locked down. Outsourcers are looking for suppliers that can scale quickly. According to Wouter van Halteren, “Suppliers will need to be able to quickly increase (and decrease) capacity in the coming years, without having to hire extra people, increase overtime or purchase additional machines.

With the occupancy rate you make money

In Wouter van Halteren’s opinion, this will require a different view of the design of the production environment. “Many metalworking companies are buying a CNC machine every year when demand increases. I understand their reasoning: they make their money with the machines. What they lose sight of is that ultimately it’s the utilization rate that counts.” The research results show that in fact only the German metal companies are aware of this. After all, 38% of them noted that their main reason for automation is to increase the efficiency of CNC machines. Nevertheless, many entrepreneurs indicated that if they start investing again, it will mainly be in machines.

Higher efficiency from existing machines

By investing in machines, they are missing an opportunity. Experience shows that the spindles of non-automated machines run on average 30 to 40 percent of the time. “Our customers who install a HALTER robot on their CNC machine see this spindle efficiency increase to 70 or even 90 percent. Automation helps companies get more out of their existing machines without having to invest in new machines and without the need for additional operators.” Companies also indicated that operators are still hard to find. In addition, robotization makes the companies more flexible because they can benefit from unmanned production hours, which allows them to scale up and down quickly. “In the post-corona era, automation is the key to success in machining,” concludes Wouter van Halteren.

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