

## KEY MARKET TRENDS IN THE EUROPEAN ADDITIVE MANUFACTURING SECTOR

### Key remarks:

- ⇒ Stronger new orders growth expected on domestic market.
- ⇒ Among AM materials, the highest orders expectations for metals.
- ⇒ During the next six months, the highest orders expected from the aerospace and medical sector.

## KEY MARKET TRENDS IN THE EUROPEAN ADDITIVE MANUFACTURING SECTOR

Spring 2023

Between March and May 2023, CECIMO, the European Association of the Machine Tool Industries and related Manufacturing Technologies, organized the sixth round of its European Additive Manufacturing Survey, which aims to assess key market trends in the Additive Manufacturing (AM) sector.

It is a six-month survey that will help the industry record trend indications for key business areas, such as domestic business, AM exports, orders by type of material, client industry demand and investment trend. 3D printing companies express their six-month indications in the key business areas compared to the situation over the past six months.

As CECIMO has established cooperation with VDMA\* to obtain a wider European figure in the AM sector including data for Germany, the report is divided into two sections. Part 1 of the report contains the results of the combined data of the CECIMO national associations' surveys and the VDMA survey and Part 2 contains only data from countries using the CECIMO survey and shows a trend based on the results of previous surveys.

### Methodology:

The first part of this report contains data from countries that use the CECIMO survey combined with the VDMA survey which contains data for the German AM sector. Keep in mind that there is a slight difference in the approach used to ask questions of participants between the CECIMO and VDMA surveys. While the CECIMO survey asks questions about expectations concerning domestic/foreign orders, the VDMA survey asks questions about the development of the AM sector in the domestic/foreign market.

The second part of the report provides more detailed results on the AM trends based only on the results received from countries using the CECIMO survey.

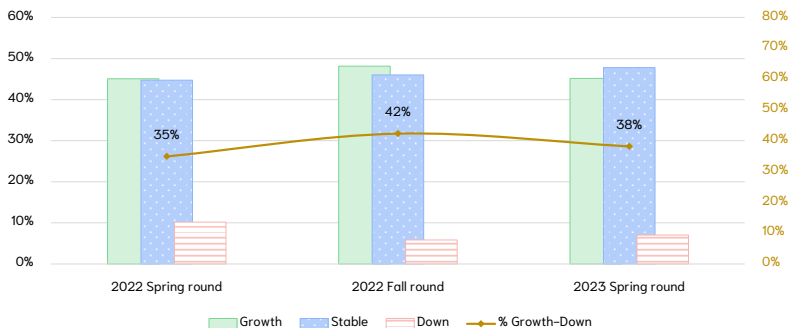
For each country, survey responses are analysed as the difference between the share of companies reporting growth and that of companies reporting a decrease in their trend indication. A positive balance provides a growth indication, and a negative balance reflects a decline.

Please note that the results at the European level are obtained by weighting country-specific results with shares derived from the 2015 Machine Tools (MT) production levels.

\* VDMA is the association of Germany's engineering industry which represents the AM industry in Germany and carries out an AM survey in Germany on a regular basis.

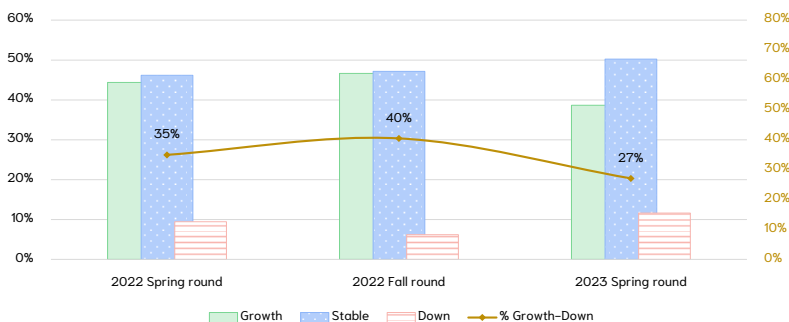
## AM TREND – HOME MARKET

Based on the latest survey results from CECIMO & VDMA, the European Additive Manufacturing (AM) sector continues to show stable growth in the domestic market, although there has been a slight decline in growth expectations. The graph below illustrates this trend, showing a slight increase in stable expectations compared to the previous survey results. It is also worth noting that the percentage of respondents expecting a decline in growth over the next six months has remained broadly the same. However, despite this small shift, it is encouraging to note that only 6% of respondents expect the European AM sector to decline over the next six months.



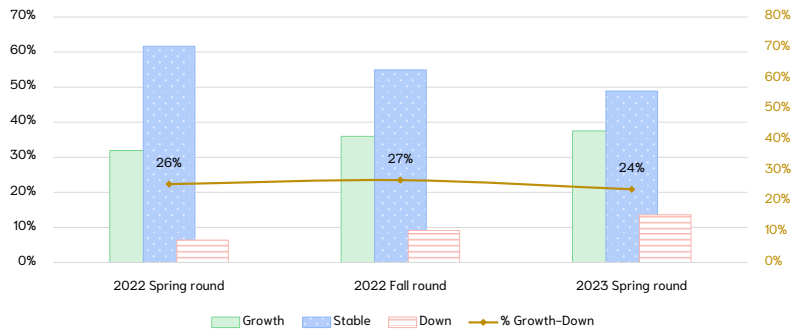
## AM TREND – FOREIGN MARKET

The latest survey results reveal a slightly different trend in the foreign market. Although there is still a positive growth-down balance, it is noticeably lower compared to the fall 2022 round. Among the participants surveyed, 39% expressed their belief in the growth of export orders within the next six months. However, this figure represents an 8% decrease compared to the previous survey round, indicating a subdued level of optimism. Furthermore, the number of respondents anticipating a decline in the export market has risen from 6% in the previous survey round to 12% in the current round. These findings, coupled with the more stable expectations compared to the previous survey round, suggest that respondents are growing more cautious in their projections for the export market.



AM INVESTMENTS

In line with the lower expectations for the domestic and foreign markets, the latest round of the survey shows a slight decrease in the growth-down balance of new investments in the AM sector (+24% compared to +27 in the previous round). Of the companies surveyed, 37% expressed growth expectations, while 14% expected lower investment (compared to 9% in the previous round). Despite the increase in the number of respondents expressing negative expectations for AM investment over the next six months, the graph below still shows a stable growth trend, with an average of 25% over the last three survey rounds.



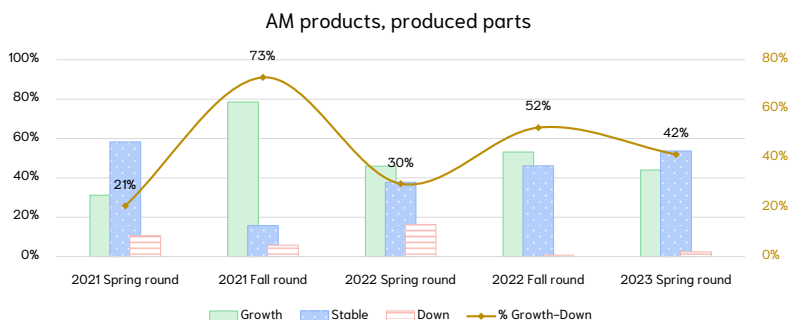
Note: The next part of the report presents the results of the CECIMO surveys based on the new methodology (Italy, Spain, Switzerland, the United Kingdom and Austria).



## AM TREND INDICATION OF THE HOME MARKET

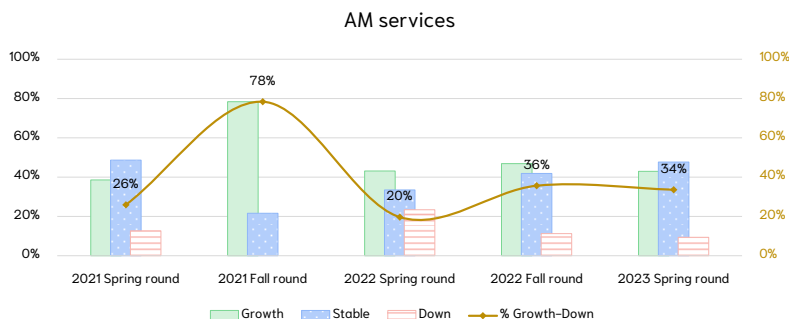
*Question: Please indicate the trend in new home market orders over the next 6 months compared to past 6 months based on value.*

In comparison to the previous survey round, the latest results reveal a slightly reduced, but consistently positive percentage balance regarding the trend indication of the domestic market. There is less optimism than in the previous survey when it comes to new orders expectations for the next six months across all AM categories (including products/produced parts, machines, materials and services). The following charts provide a more detailed breakdown of trends and percentages for each category in the preceding rounds.

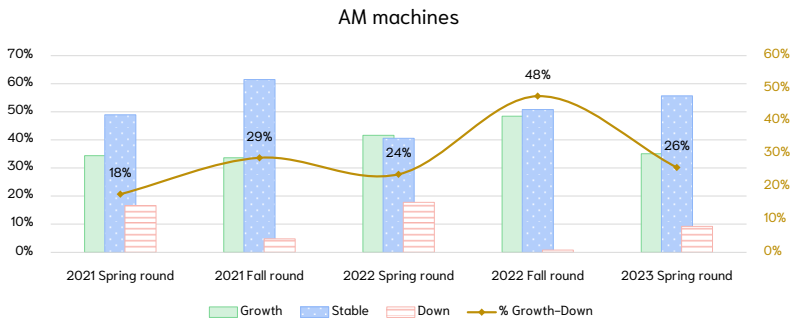


The AM products & produced parts category is expected to experience the second strongest growth in orders over the next six months. However, as can be seen in the chart above, there is a visible increase in the number of respondents expecting orders for this category to remain stable (54% compared to 46% in the fall 2022 round).

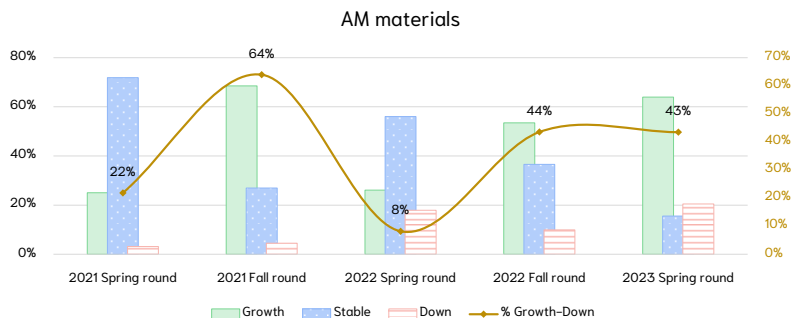
Expectations for new orders for AM services (graph below) were also slightly less optimistic in the most recent survey. While the share of those reporting steady expectations increased, the growth-down balance declined. However, it still remains at a strong positive level (34%). Positive development is visible through a further decline in the number of respondents who expect a decline in new orders for services (9% compared to 11% in the fall 2022 results).



Unlike the previous round of the survey, when AM machines orders expectations were among the highest, the latest survey results show a significant increase of respondents with more stable and negative expectations. However, the growth-down balance, at a level of 26%, is just above the spring 2022 level. Although not as strong as in the previous six months, AM machines builders can still expect growth in new orders over the next six months.



The AM materials percentage balance trend shows a similar level compared to previous survey round. As shown in the graph below, the number of respondents expecting an increase in orders for AM materials has increased, but the number expecting a decrease in new orders has also increased. As a result, the percentage balance decreased slightly to 43%. Although at a slightly lower level, the strongest orders in domestic market in the next six months can expect the producers/distributors of AM materials compared to other categories analysed in this survey.



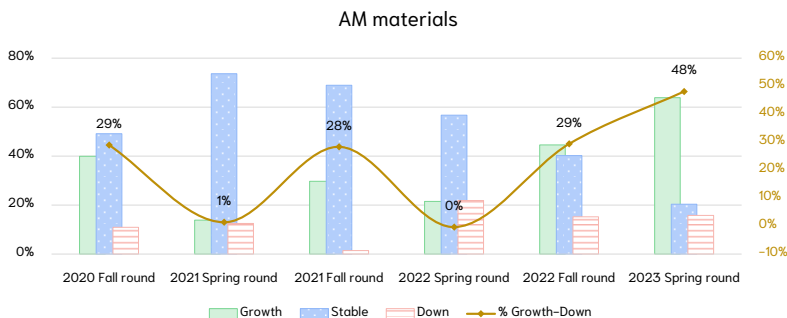
Overall, the previous charts indicate that domestic order expectations are somewhat lower than they were in the fall of 2022. While the AM materials and AM services categories show very slight changes compared to the previous survey round, a more significant decline in business optimism regarding demand in the next six months is visible in the AM products/produced parts and AM machines categories. However, the higher growth compared to down indications is a good signal of stable domestic AM market growth.

## AM TREND INDICATION OF THE EXPORTS

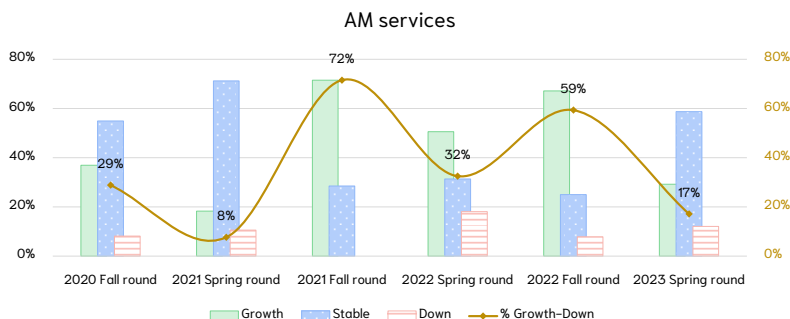
*Question: Please indicate the trend in new export orders over the next 6 months compared to past 6 months based on value.*

Similar to the domestic market, participants in the latest survey expressed on average lower expectations for foreign/export orders compared to the previous survey round. However, while there is less optimism in most categories, the AM materials category still shows higher order expectations than in the previous six months.

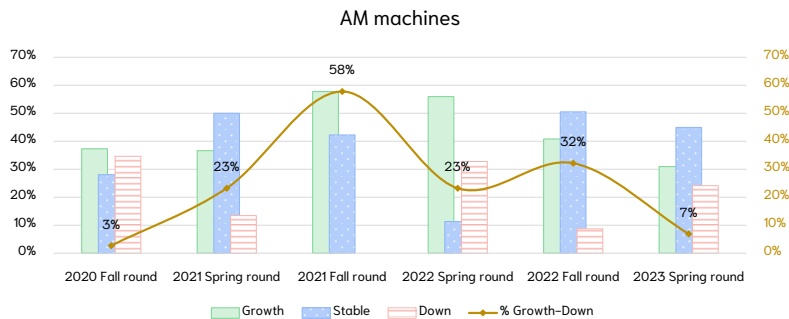
As shown in the graph below, there has been a significant shift in the AM materials sector compared to the previous survey round. The share of respondents expecting more stable order books has decreased significantly in the latest round in favour of growth expectations. As a result, the growth-down balance reached a record high of 48%. This indicates strong foreign demand for AM materials over the next six months, the highest among the other categories.



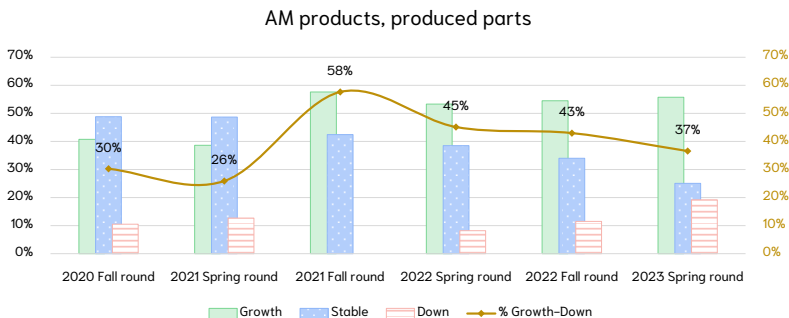
Looking at the historical trend, the spring round usually brings lower growth expectations for export orders in the AM services category. This was also the case in the latest round, where a significant decrease in growth expectations and an increase in stable and down expectations can be observed. However, the growth-down balance remained positive at 17%. Compared to the domestic market, AM service providers can expect lower orders on the foreign market in the next six months.



Like in the case of the domestic market, a similar trend regarding export orders can be observed in the category of AM machines, where participants in the latest survey expressed lower growth and stable expectations, while the share of respondents who expect a decline in new foreign orders increased. However, the growth-down balance still remained positive at +7%, indicating that, on average, AM machine producers can expect stable and slight growth in foreign orders compared to the previous six months.



Regarding AM products and produced parts, the chart below shows strong growth expectations but also increasing concerns. While there is a stable proportion of respondents who have growth expectations, there is a visible increase in the proportion of those who expect a decline. However, despite these concerns, with a growth-down balance of 37%, this category is expected to have the second strongest growth in new foreign orders in the coming six months.



Although not as strong as in the domestic market, the AM sector can still expect a stable growth path in the foreign market, with demand for AM materials expected to be strongest in the next six months. In line with the deterioration in global business climate indicators and global demand during the survey period, it might have been expected that these developments would also be reflected in AM demand expectations.

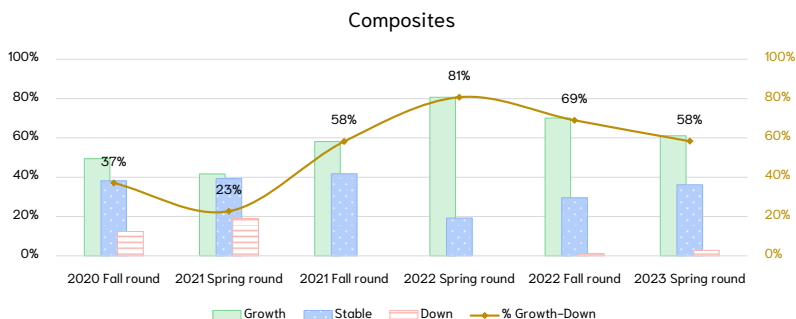


## AM MATERIAL TREND INDICATION

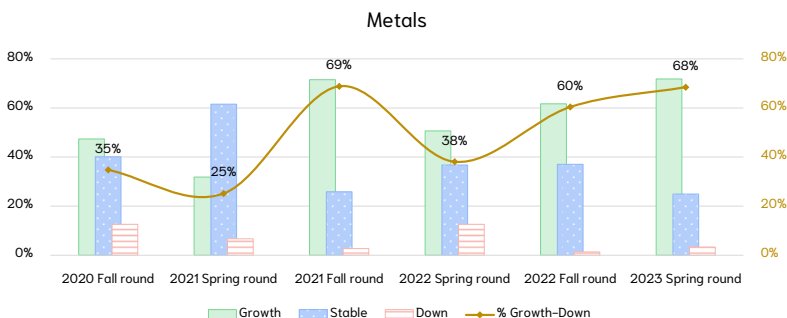
*Question: Please indicate the trend in total new orders by material over the next 6 months compared to past 6 months based on value.*

Compared to the fall survey, new orders indications for most materials show higher growth-down balances, with the exception of Composites.

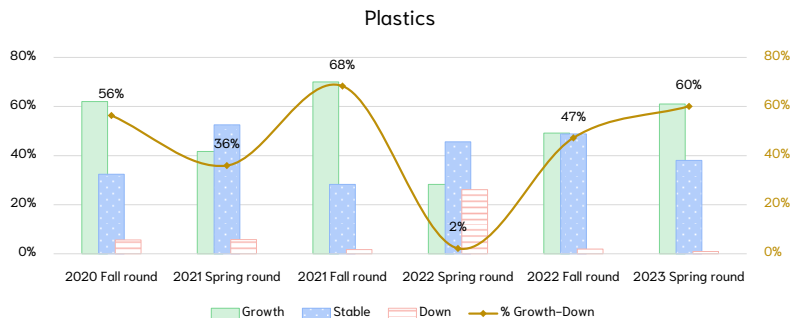
Despite more stable and down expectations, survey respondents continue to express strong new order expectations for composites, with a growth-down balance of 58% in the latest survey round. However, due to a further decrease in growth expectations in the latest round, composites are no longer expected to have the highest orders growth in the next six months, as was the case in the previous two survey rounds.



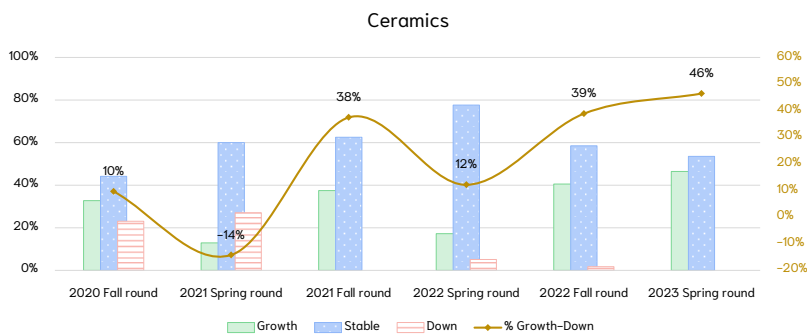
According to the latest survey results, respondents anticipate the strongest orders growth for the metals category, which has taken over the position as the material with the fastest-growing orders expectations (growth-down balance of 68%). Also, as shown in the chart below, it is important to highlight that the share of respondents who expect a decline in new orders remains very low (3%) .



Growth expectations for plastics orders improved further compared to the fall 2022 results. Following a significant increase in growth expectations, and with only 1% of respondents having negative expectations, the percentage balance (growth-down) reached 60%. This puts plastics in second place in terms of highest expectations for orders/usage of this material in the coming months.



A positive trend can also be observed in the demand expectations for ceramics. As shown in the graph below, there are no respondents who expect demand for this material to decline, and growth expectations have been increasing over the last three survey rounds, almost reaching the proportion of respondents who expect orders to remain stable.



Comparing the average balances for all materials, this round shows higher positive indications than the fall 2022 survey results. However, thanks to the strong improvements in new orders expectations, AM companies providing solutions related to the use of metals and plastics as materials can expect the strongest orders in the short term.

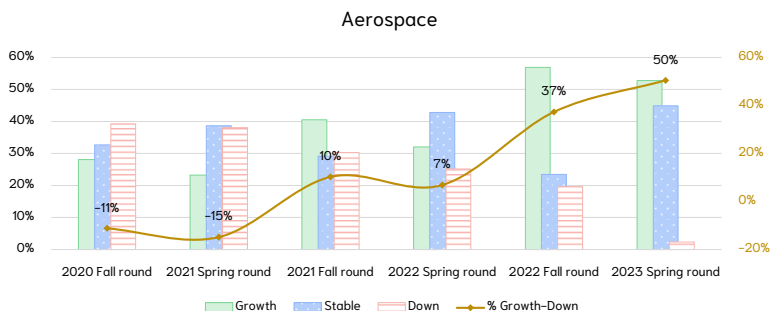
Although not shown in the previous graphs, growth expectations for the other materials category have fallen slightly (the growth-down balance has fallen from 56% in the fall 2022 round to 53% in the latest round).

## BUSINESS TREND INDICATION: CLIENTS

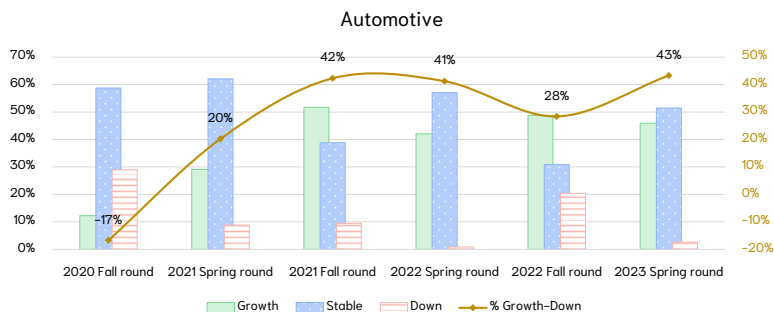
*Question: Please indicate the trend in total new orders by customer sector over the next 6 months compared to past 6 months based on value.*

For the main AM purchasing sectors, the growth-down balance, which reflects the trend in new order expectations, has continued to improve on average since the previous survey round. The aerospace, automotive and chemical & pharmaceutical sectors show improved growth-down balance, while the machinery and medical sectors have remained relatively stable.

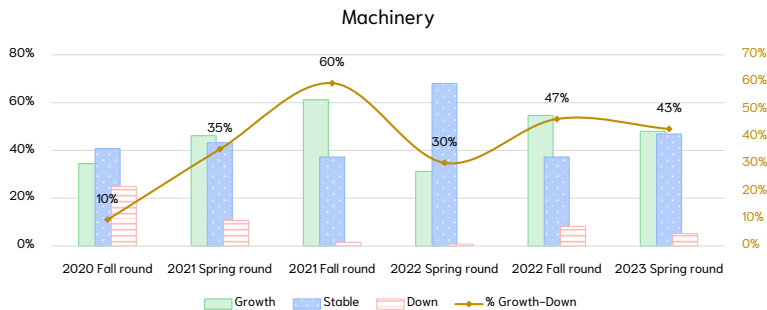
The significant decline in the share of respondents expecting a decrease in new orders in the aerospace sector has contributed to a record high growth-down balance, as shown in the graph below. Looking at all six rounds, there has been a steady decline in negative expectations, coinciding with an increase in the proportion of respondents expecting growth and stable orders. With only 2% expecting a decrease in orders from this sector, the aerospace sector is expected to lead AM demand growth over the next six months.



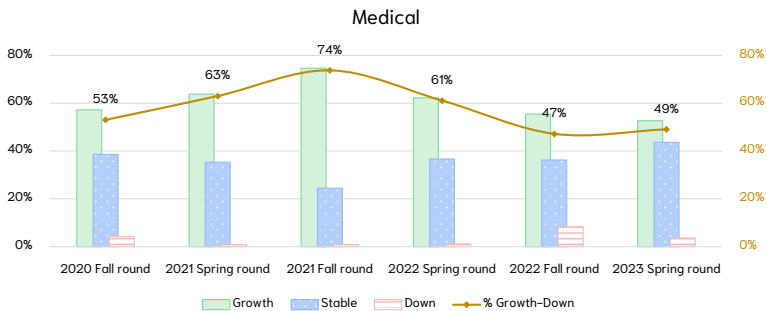
After experiencing concerns and a lower growth-down balance in the fall of 2022, the latest survey results indicate a significant improvement in expectations for AM orders from the automotive sector. The positive growth-down balance has increased from 28% to 43%, with only 3% of respondents expecting lower orders compared to the previous six months. These positive developments can be attributed to the improved situation regarding reduced supply-side issues and enhanced output levels within the global automotive sector.



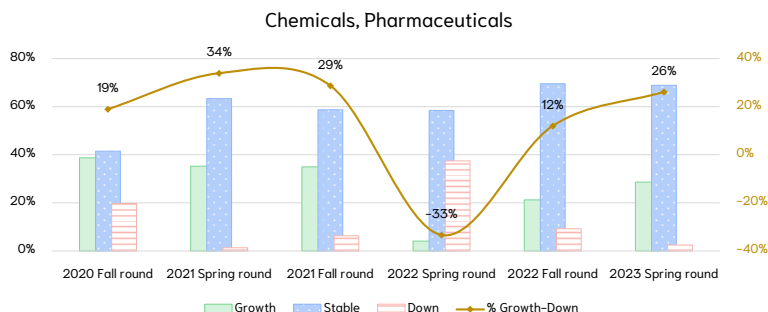
Regarding the expectations for new orders in the machinery sector, there has been a small fall in the number of participants forecasting a downward trend compared to the previous six months. In addition, there has been a noticeable shift towards more respondents expecting order books to remain stable and fewer expecting growth over the next six months. However, new orders expectations for the machinery sector remain at a high level, as reflected in a net balance of 43%.



The growth-down balance improved slightly compared to the previous reporting period due to a reduction in the downward expectations for new orders in the medical sector. The reduction in the proportion of participants expecting a decline, from 8% in the fall of 2022 to 4% in the latest round, indicates that strong order growth is expected to continue from the medical sector. While growth expectations may be slightly lower compared to 2020 and 2021, the medical sector is expected to remain one of the main demand drivers for the AM solutions in the next six months.



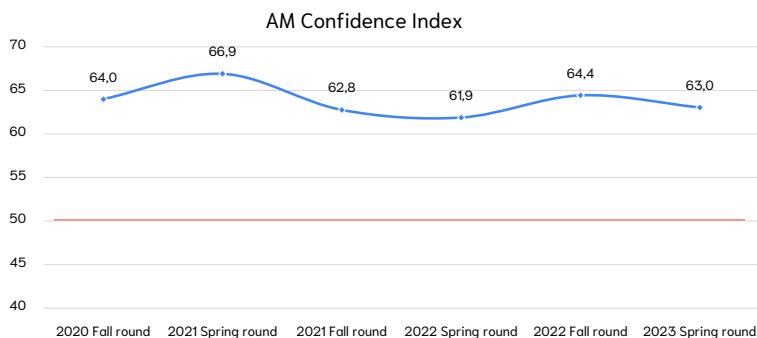
Although there has been a marked improvement compared to the previous reporting period, chemicals & pharmaceuticals remain the sector with the lowest expectations for AM order growth. As seen in the graph below, there has been a reduction in the number of negative indications and a shift towards growth. While the percentage balance and the expectations are still below the levels seen in 2020-21, the AM orders from this sector are expected to be somewhat higher than in the previous six months.



Net orders from other sectors are expected to grow at a slower pace over the next six months, with a positive growth-down balance of 35% (compared with 66% in the fall 2022 round).

## AM CONFIDENCE INDEX

Although the AM Confidence Index has experienced a slight decrease to a level of 63.0 points in this survey round, it still remains strongly in the favourable zone. With levels above 50, this confirms the continued trend of growth expectations in AM investments.



## Associations supporting the report:



**METALTECHNOLOGY  
AUSTRIA**



THE MANUFACTURING TECHNOLOGIES  
ASSOCIATION



IN PARTNERSHIP WITH 



UCIMU-SISTEMI PER PRODURRE



### About CECIMO:

CECIMO is the European Association of the Machine Tool Industries and related Manufacturing Technologies. We bring together 15 national associations of machine tool builders, which represent approximately 1500 industrial enterprises in Europe (EU + UK+ EFTA + Turkey), over 80% of which are SMEs. CECIMO covers 97% of the total machine tool production in Europe and about 1/3 worldwide. It accounts for approximately 150,000 employees and a turnover of around 25.1 billion euros in 2022. More than three quarters of CECIMO production is shipped abroad, whereas half of it is exported outside Europe.

### Contact:

Filip GEERTS, Director General, [filip.geerts@cecimo.eu](mailto:filip.geerts@cecimo.eu)

Anto JERKOVIC, Economist – Author, [anto.jerkovic@cecimo.eu](mailto:anto.jerkovic@cecimo.eu)

Vincenzo BELLETTI, Director of EU public affairs, [vincenzo.belletti@cecimo.eu](mailto:vincenzo.belletti@cecimo.eu)

Copyright © 2023 CECIMO



## Machine Tools Innovation Awards

Deadline for applications: 1 September 2023

[APPLY NOW](#)



Awards Ceremony  
6 December 2023