

# 9th drupa Global Trends Report 2023 - The full report

Welcome to the 9th drupa Global Trends Report. The report series is unique in tracking key economic and market developments across the print industry globally, regionally and within markets. We are pleased to report confidence returning to the print industry, getting back to sustainable growth and development, and looking forward to drupa 2024.

Over 600 printers and suppliers contributed and we must thank them. The participating panel members get free access to crucial data to help them best assess how to invest and develop their companies in what is as always, a challenging market and broader socio-economic environment.

We circulated two separate surveys to printers and suppliers in May and June this year, which share many questions, but ensure that their differing interests are addressed. We are careful to be transparent in the report, not drilling down into very small data sets and spelling out where we have used marginal data sets, so readers can decide for themselves how useful the findings are.

Confidence levels were found to be growing across all markets and almost all regions, despite challenging economic headwinds. It is clear that the old saying, "Adapt or die", applies as printer and suppliers alike seek new ways to grow and thrive.

Messe Düsseldorf, in its role as drupa organiser, must thank Printfuture (UK) and Wissler & Partner (Switzerland) for conducting and authoring this report series. We are confident you will find the resulting report insightful. We welcome your feedback and invite you to send us an email at [drupa-expert-panel@drupa.de](mailto:drupa-expert-panel@drupa.de).

The drupa team  
November 2023

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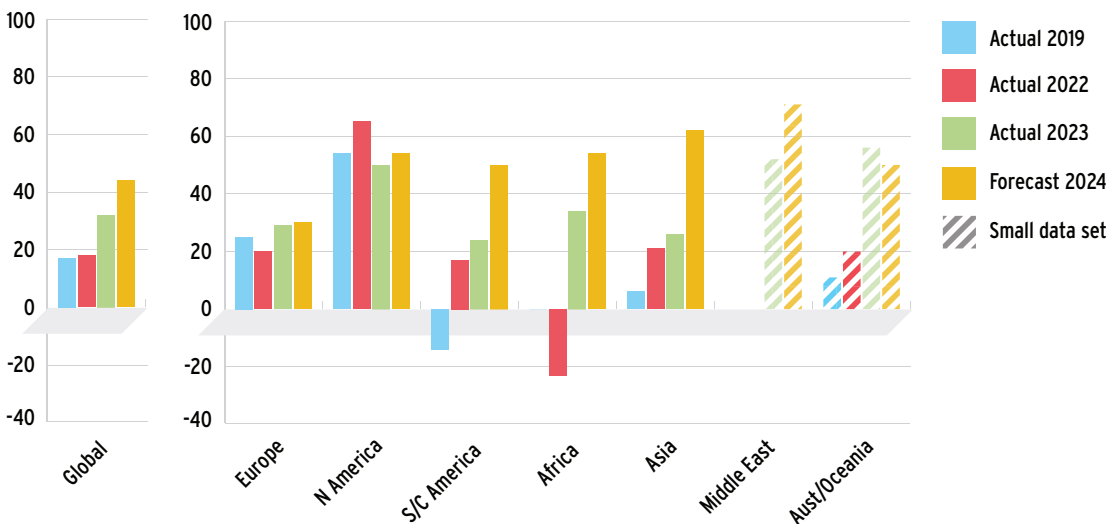
# 9th drupa Global Trends Report 2023 - Executive Summary

Last year's report, the first since the Covid pandemic, was remarkably positive as the ever-resilient print industry bounced back, reporting a more positive condition than in 2019 i.e. before

COVID19. The results this year have maintained that momentum, with a further improvement in sentiment for 2023 and very positive expectations for 2024.

## drupa Printer Barometer 2023 economic confidence by region

% net balance positive v negative



**Chart A How do you rate your company's current economic situation? What are your expectations for the next 12 months?**

Globally in 2023, 44% stated their company's current economic situation was 'good', and 12% described it as 'poor' while the remaining 44% described it as 'satisfactory'. The net positive balance being +32% i.e. 44% minus 12%, is the overall result shown as the green column in the chart, 14% better than in 2022. It is this net positive or negative balance that is shown in many of the charts that follow.

It is not all good news. Germany was downbeat at +12%, the same as 2022. Yet the Rest of Europe was +34%. North American (N. America) sentiment softened to +50% from the peak last year. However, South/Central America (S/C. America) +24%, Africa +34%, Middle East +52% (small data set) and Australia/Oceania

+56% (small data set) all recovered well from previous lows. Looking ahead, all regions, except Australia/Oceania, expect better performance in 2024, although Germany at just +4% is far more cautious than most.

The detailed breakdown of printers and suppliers by market and region is given in the full report's Appendix. Where data sets are too small to use separately, they are not shown, but are included in the global data. Where small data sets have been shown, attention is drawn to this limitation in both the text and the charts<sup>1</sup>.

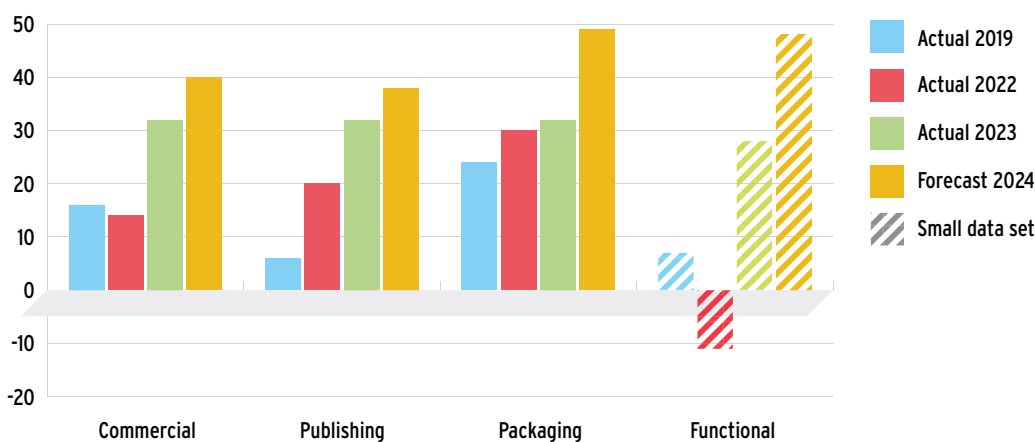
1. Column gaps in any chart indicate a nil result. Banded data columns or dotted data lines indicate <20 in the data set.

Looking at markets, there is a striking recovery in confidence amongst Commercial and Publishing printers across the globe, while Packaging continues in its confident fashion.

The unexplained dip in confidence for Functional print in 2022 is reversed - probably a result of the small data set.

### drupa Printer Barometer 2023 economic confidence by market

% net balance positive v negative



**Chart B How do you rate your company's current economic situation? What are your expectations for the next 12 months?**

Suppliers were a little more cautious this year than last at 32%, down 2%. N. America, S/C. America and Asia were up, with Europe down 5%. All markets were fairly flat this year, but all showed great confidence for next year, perhaps in part because of drupa 2024!

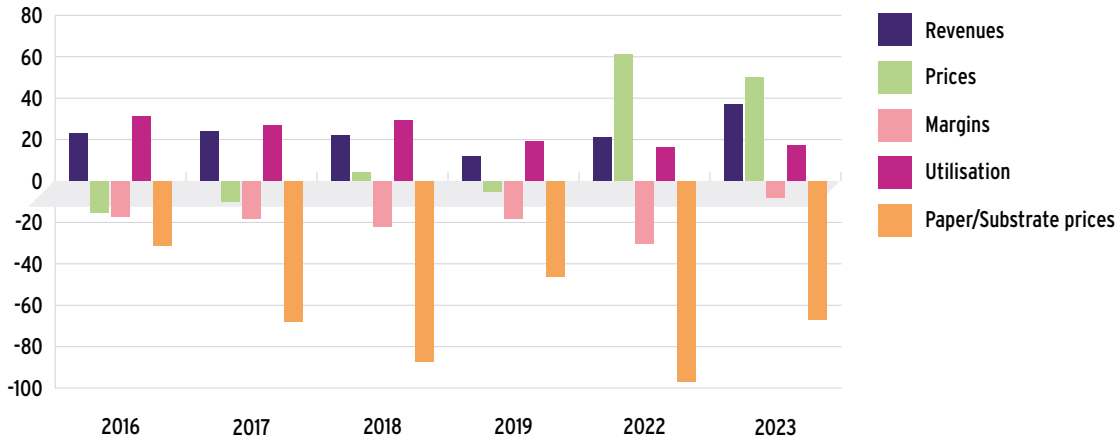
For the second year running, printers raised prices globally; this after seven years of falling prices. Revenues grew at the fastest rate by far and margins decreased at the slowest rate ever recorded.

The pattern was not universal, with Europe and S/C. America reporting a more mixed situation. Suppliers reported a similar upbeat assessment.

Commercial pricing is strong, net balance average +57% for the last two years compared with an average of -21% 2013-2017. Publishing is also an average +57% last two years; average -18% 2013-2017. These figures suggest the beginnings of better times for both market sectors. The stronger financial performance for the industry as a whole is welcome, as long as it does not crumble under wider inflationary pressures.

## Global printer financial performance over time

% net balance positive v negative



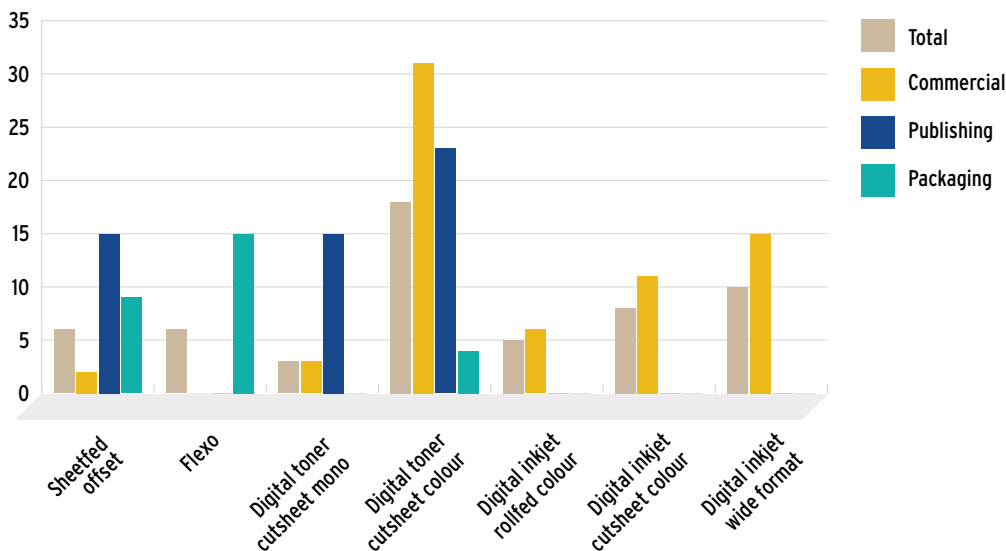
**Chart C How have your company's revenues/prices/margins/utilisation/substrate prices changed over the last 12 months?**

Every year we ask printers to assess the net print volume by print technology. Chart D shows this year's results for the main print processes in total and by main market sectors. The resilience of sheetfed offset is remarkable with net growth in

all markets, even commercial after a number of years of reductions. Flexo grows fast in packaging and Digital toner cutsheet colour is far ahead of all other digital processes in all markets.

## Print volume by technology 2023

% net balance positive v negative



**Chart D How would you assess your printing volume in the following technologies over the last 12 months?**

Globally the digital adoption - printers claiming more than 25% of turnover in digital - is growing from 26% in 2014 to 29% in 2023. At first sight this is only a modest growth. However, according to various industry sources volumes have grown significantly since 2014, even though the digital adoption rate appears to be slowing down.

25% of the total printer panel reported having web-to-print installations in 2014. The figure for 2023 is still 25%. Some regions have less e-commerce for cultural, technical and other reasons but the figure is flat almost everywhere. Those operating web-to-print enjoyed a surge in demand from that source over the Covid period, but demand has fallen back this year almost to pre-Covid levels. The exception is Packaging where the major growth of 2022 has been largely maintained.

Employment numbers amongst printers are flat in the developed economies, but show significant growth elsewhere.

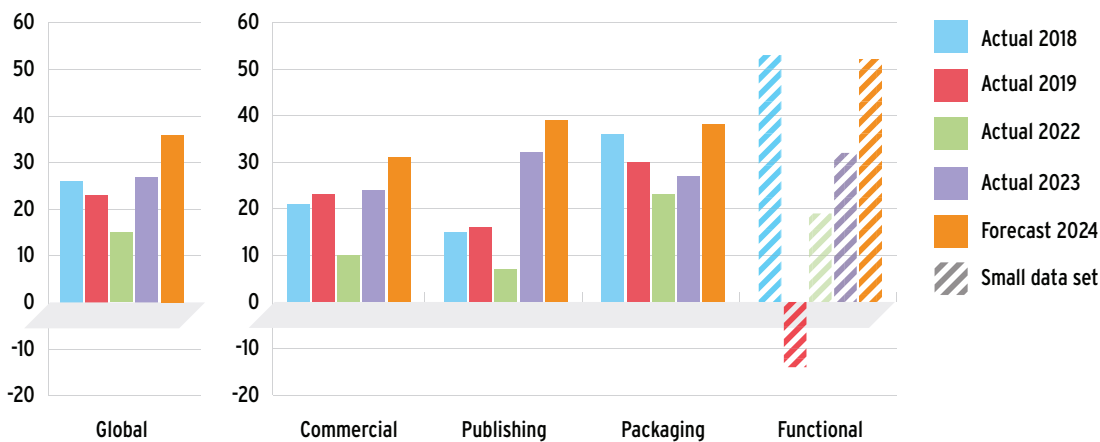
Labour shortages are reported by both printers 47% and suppliers 39%. Conventional press operators and finishing staff are hardest to recruit for printers and manufacturing and technical support staff amongst suppliers.

Supply chain issues have loomed large for both Printers 63% and Suppliers 73%, although all expect issues to be less next year.

Capital expenditure fell back during the pandemic and there was an inevitable lag last year but demand picked up strongly in 2023 with even higher forecasts for next year, drupa 2024! There was the expected sustained demand from Packaging printers, and an encouraging surge from Commercial and Publishing printers, while Functional printers returned to levels not seen since 2018. As usual, print technology and finishing equipment are the strongest targets by far.

### Printer CapEx 2023 Global and by market

% net balance positive v negative



**Chart E How has capital investment changed over the last 12 months?  
Over the next 12 months how will your company's capital investment...?**

Sheetfed offset remains first choice for print technology globally and has been since the first Trends report in 2014. Digital presses take the next two places for popularity, as shown on the

table below. There is more variety when analysing the market sectors, signalling the amazing range of products and market conditions that together dictate best investment choices.

2023 Print technology investment targets - global and by market				
	Global	Commercial	Publishing	Packaging
1st Choice	Sheetfed offset 29%	Digital inkjet wide format 33%	1st Equal at 32% Sheetfed Offset & Digital toner cut-sheet colour	1st equal at 35% Sheetfed offset & Flexo
2nd Choice	Digital toner cut-sheet colour 20%	Digital toner cut-sheet colour 31%		
3rd Choice	Digital inkjet wide format 19%	Sheetfed offset & Digital inkjet cut-sheet colour 24%	Digital inkjet cut-sheet colour 16%	Hybrid Off-set/flexo/digital 21%

**Table 1: 2023 Print technology investment targets - global and by market**

Capital expenditure amongst suppliers was relatively flat at just +4% net balance. However, all were bullish for 2024 at +24% across all markets, particularly for the Functional market. Building sales channels, raising efficiencies and developing new services are the preferred targets.

Both printers and suppliers have increasingly relied on diversification to create growth, though the rate of change is slower as trading has returned to more normal patterns post-Covid.

Socio-economic issues loom as large as ever over all regions. The risk of economic recession is the top concern 47%, knocking the impact of pandemics into second place 41%. However, beyond the top two issues there were major variations across almost every region. For example, S/C. American printers were concerned about Political instability 52%, African printers highlighted currency issues 51%, Australian printers pointed to environmental issues 33%, Asian printers commented on trade wars 23% and N. American printers worried about standards of living 32%. Opinion is divided between those that

think market forces are more important 43% and those who think socio-economic forces 46%.

We returned to market specific questions for the first time since 2019. For commercial markets, the key takeaway is the advantages of diversification in both markets served and services offered. The proportion of publishing printers in the sample has halved since 2014 (from 30% of the total 2014 to 15% in 2023). And the mix of markets they serve has also changed, with fewer in the newspaper, magazine and catalogue markets but more offering varying book printing options. Packaging printers report increasing demand for added value packaging e.g. interactive print. The search for more environmental alternatives to plastic packaging is a major focus for many, particularly for Flexible printers of course. While our sample of Functional printers is small, the shift to inkjet print from screen and toner is clear.

**In conclusion**, the majority of printers and suppliers across the globe have increasing confidence for the future, despite the many market and socio-economic risks and challenges. Prices and revenues are up strongly and the squeeze on margins is less than ever. The question is whether the industry will remain as positive in the face of inflationary pressures.

Perhaps the most encouraging news is the clear improvement in confidence amongst Commercial and Publishing printers, who appear to have adapted to the impact of the digital revolution and can plan forward with greater confidence. Meanwhile Packaging printers enjoy sustained demand and Functional printers continue to enjoy an astonishing and ever-growing variety of products and markets served.

Capital expenditure has recovered to pre-Covid levels and 2024 is forecast to be a bumper year for investment - good for drupa 2024!

Finally let us quote one printer's confidence in the industry's future.

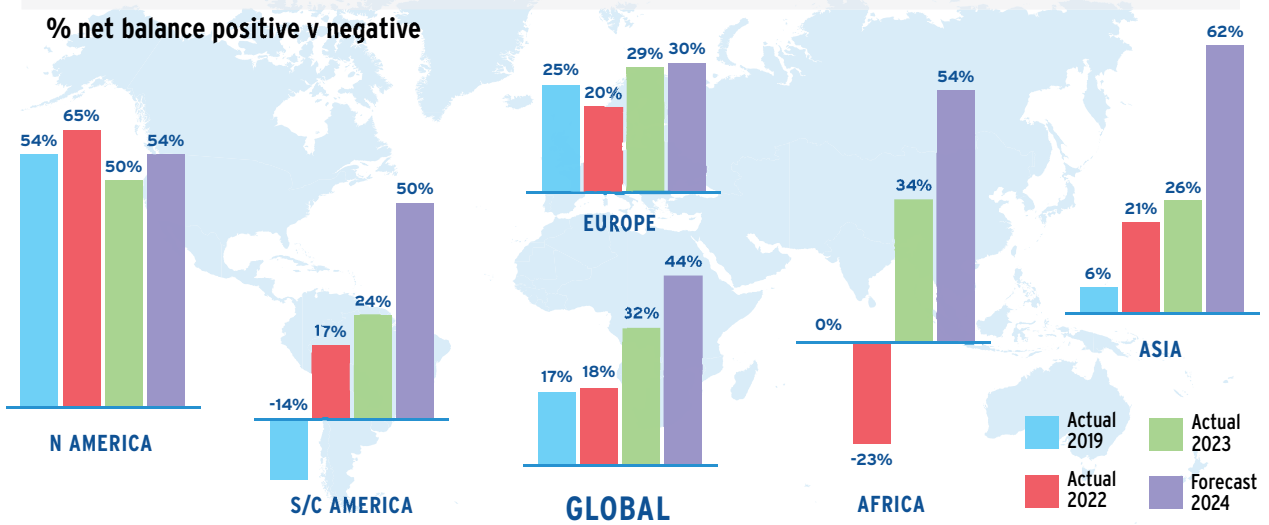
*"We notice that people although prefer to use digital tools, they invest on print products that offer a distinct quality (i.e. fine printing, good binding etc.). This type of printing sector will not extinguish as it offers a sense of uniqueness, a product that you want to feel/touch/keep."*

**Commercial printer, Greece.**



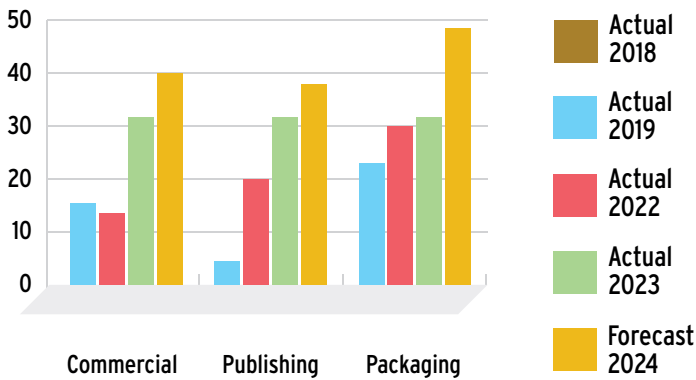
### drupa Printer Barometer economic confidence 2023 Global and by region

% net balance positive v negative



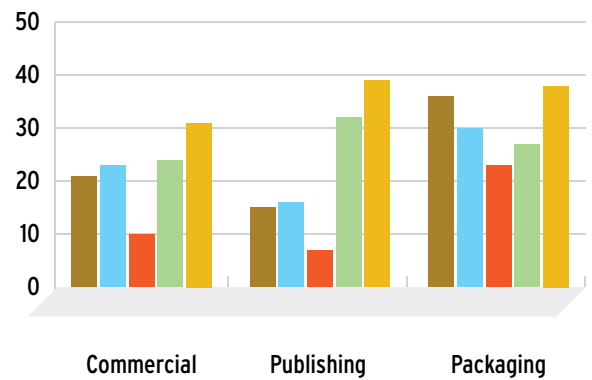
### drupa Printer Barometer 2023 economic confidence by market

% net balance positive v negative

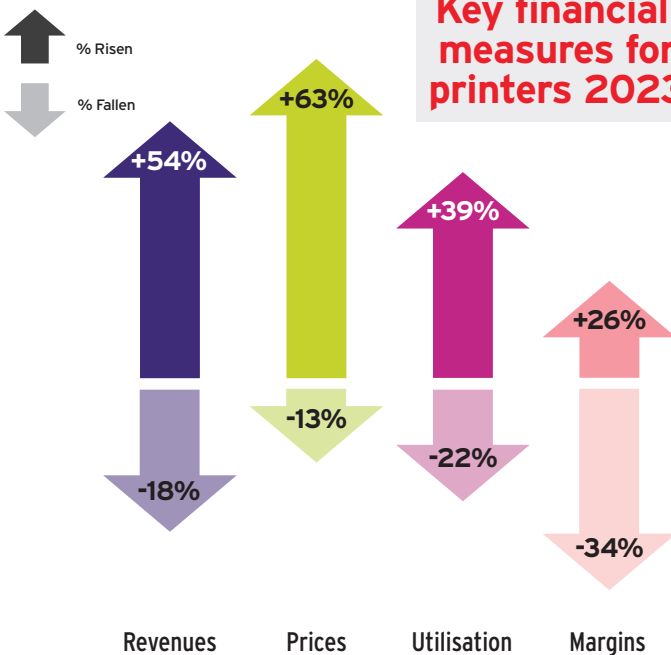


### Printer Cap Ex plans 2023 by market

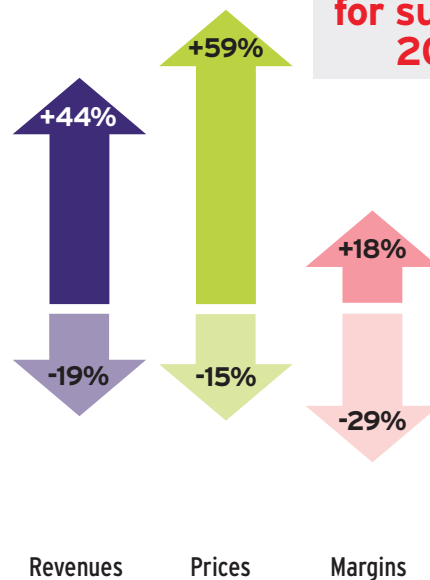
% net balance positive v negative



### Key financial measures for printers 2023

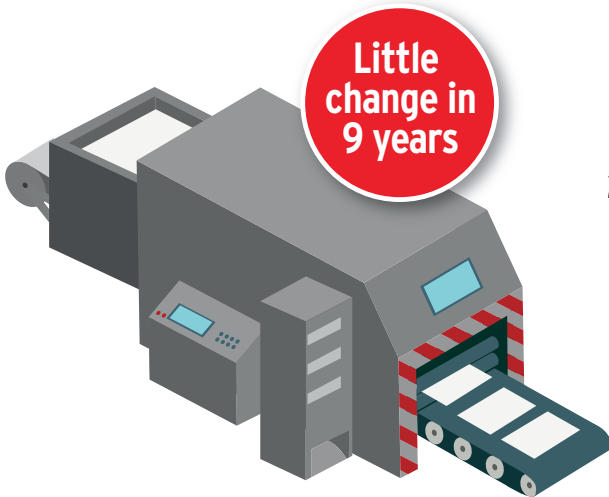
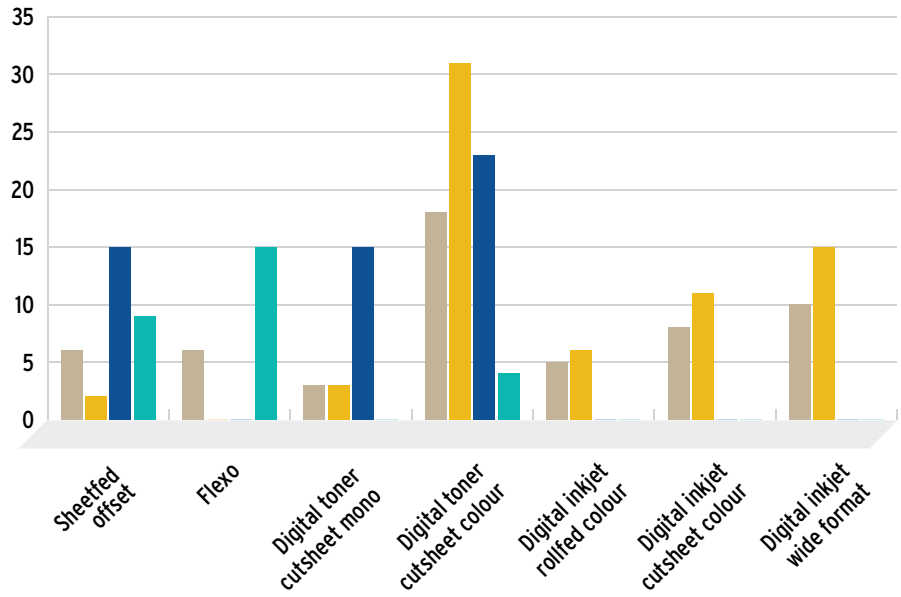
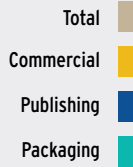


### Key financial measures for suppliers 2023



## Changes in print volume by technology 2023

% net balance positive v negative



### Digital print as % of turnover

26% had more than 25% of turnover digital in 2014

29% have more than 25% of turnover digital in 2023

### % Web-to-Print installations

25% in 2014  
25% in 2023

## Top two print technology investment plans by market 2023

### Global total

Sheetfed offset **29%**

Digital toner cutsheet colour **20%**



### Publishing

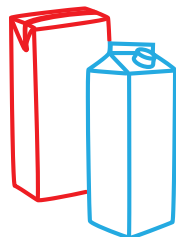
**32%** Sheetfed offset

**32%** Digital toner cutsheet colour

### Packaging

Flexo **35%**

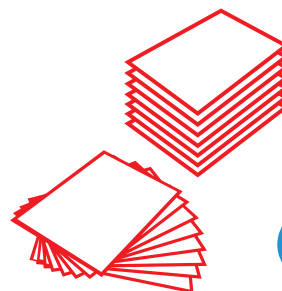
Sheetfed offset **35%**



### Commercial

**33%** Digital inkjet wide format

**31%** Digital toner cutsheet colour



# The Global Economic Outlook 2023 - Living Through Turbulent Times

We need to remind ourselves how different the first three years of this decade have been in comparison with the 2010s. The world endured a once-in-a-century pandemic, which governments countered by shutting down whole areas of the global economy and provided unprecedented monetary and fiscal stimulus. These actions combined with the cost of restarting the global economy and restoring supply chains, fuelled the biggest and most sustained surge in global inflation in over 40 years. Central banks had to respond with the most aggressive global interest rate rises in decades. The consequences included a banking crisis, tighter credit conditions, and widespread forecasts of a recession this year or next.

These events will likely reverberate around the global economy for years to come. More frequent and more volatile business cycles are expected and governments will have less scope to administer regular doses of quantitative easing. It is likely we are entering an era of constraints on supply and economic labour market shifts, which will become

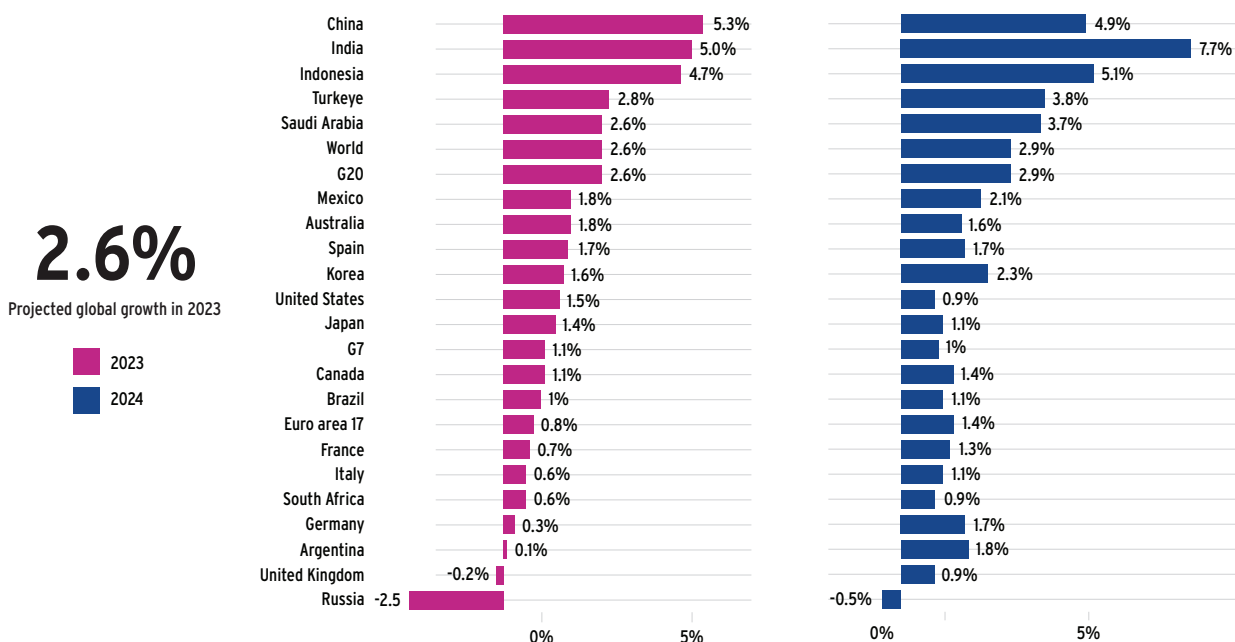
regular sources of economic fluctuations and risk management.

## The economic aftershocks

The world economy has been severely weakened with marginal economic growth, stubborn inflation and rising interest rates in the major developed economies. This is clouding the near-term economic outlook and creating uncertainty. Having to deal with the legacy of COVID-19, the protracted war in Ukraine and the accelerating impact of climate change, have all impacted growth prospects. Global growth has slowed from 6.0% in 2021 to 3.2% in 2022 and 2.7% in 2023 but is projected to reach 2.9% in 2024. This is the weakest growth profile since 2001 except for the global financial crisis and the acute phase of the COVID-19 pandemic. Global growth is projected to remain at a below-trend rate in 2023-24, with inflation falling gradually as the tightening of monetary policy takes effect. Growth has slowed to the extent that the global economy is perilously close to falling into recession.

## Real GDP growth projections for 2023 and 2024

Year-over-year, %



Source: OECD Economic Outlook. Interim Report March 2023

Major economies are undergoing a period of pronounced weakness. Globally, public debt as a share of GDP continues to be notably higher than before the pandemic, although the gap has narrowed in the last two years, largely due to a

withdrawal of fiscal support and some growth recovery. The lowering price of commodities and the full reopening of China are cause for some optimism but the growth benefits will be limited to the near-term future.

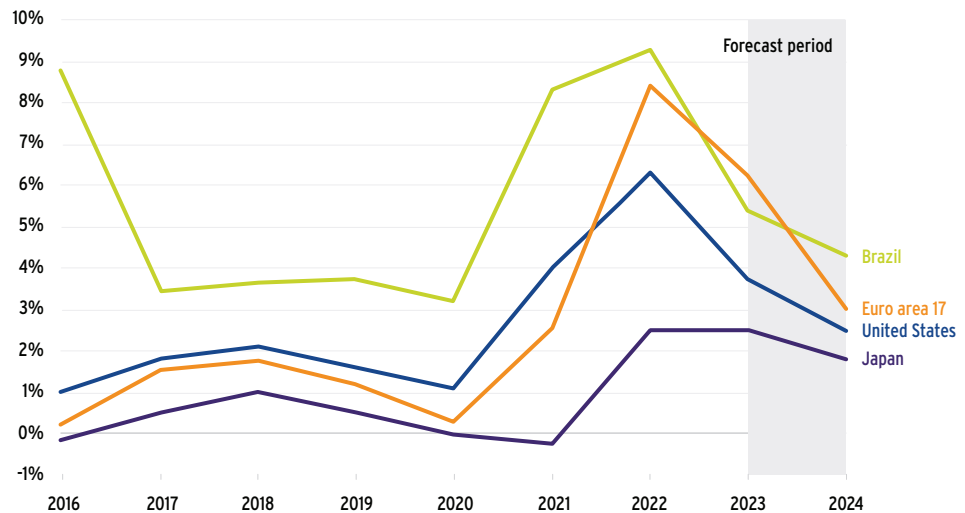
## Managing trade-offs and fighting Inflation

### Headline inflation

Year-over-year, %

**5.9%**

Projected inflation for the G20 in 2023



Source: OECD Economic Outlook. Interim Report March 2023

Policymakers around the world are facing increasingly difficult trade-offs between fighting inflation, preserving financial stability and supporting inclusive and sustainable economic recoveries, against the backdrop of a raft of uncertainties. Headline inflation has begun to decline mainly due to the easing of energy and food prices. The decline in energy prices partly reflects the impact of a warm winter in Europe, which helped to preserve gas storage levels, as well as lower energy consumption in many

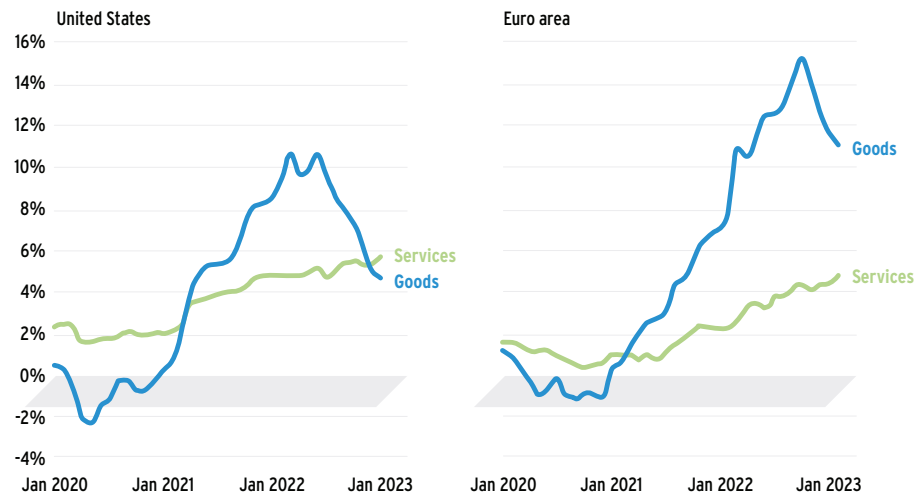
countries. Goods price inflation has started declining in most countries due to the gradual return of normal demand and the easing of global supply chain bottlenecks post COVID. Core inflation (excluding food and energy) continues to be driven by strong service price increases and cost pressures from tight labour markets. Average global inflation is projected to decline from 7.5% in 2022 to 5.2% in 2023 due to the expectation of lower food and energy prices and reduced demand especially in the large developed economies.

## Services inflation is still rising

Inflation, %, year-on-year change

# 7.6%

Services inflation in USA,  
January 2023



Note: based on data availability, Euro area average for services include: Austria, Belgium, Spain, Estonia, Finland, France, Greece, Ireland, Italy, Lithuania, Luxembourg, Latvia, Netherlands, Portugal, Slovak Republic and Slovenia; for goods inflation it includes: Austria, Spain, Finland, France.  
Source: OECD Economic Outlook, Interim Report March 2023

## Boosting future growth is the number one priority

Consistent growth prospects are still a major concern globally. In the United States, growth is expected to be below potential in both 2023 and 2024, as strict monetary policy reduces demand pressures. While average annual growth is projected to fall both this year and next, they will improve thereafter. Growth in the Euro area will also be slow in 2023, but the benefits of lower energy prices and declining inflation should help growth momentum to gradually improve, leaving average annual growth in 2024 almost double the projected 0.8% in 2023. The United Kingdom is also expected to have a mild rebound in 2024, with output rising by 0.9% after a year-on-year decline. Japan, which will have additional fiscal stimulus this year and no change in policy interest rates is projected to grow between 1-1.5% per annum in 2023 and 2024. Korea and Australia will benefit from the expected growth rebound in China, offsetting the impact of tighter financial conditions.

In the last three years low unemployment, high vacancy rates and high inflation in most major economies has increased the pressure on higher wage demands. However, in some countries, including the United States, the pace of wage

increases has now started to level off or even decline. Generally, wage growth remains at rates that are unsustainable and inconsistent with inflation returning to target. With the current weak underlying productivity and growth, this can only be achieved if corporate profit margins contract. Labour markets in many developed economies are marked by low unemployment rates and skilled worker shortages. Since the pandemic, the gender gap in employment rates has narrowed, in part due to increased use of telework and flexible work arrangements in many developed economies.

## Growing optimism in emerging markets

The emerging-market economies in Asia are likely to be less affected by the global slowdown, helped by the rebound in China and more moderate inflation pressures. Growth in China is projected to rebound to 5.3% this year, before easing to 4.9% in 2024. India's growth is projected to be around 6% in FY 2023-24, amidst tighter financial conditions, before recovering to around 7% in FY 2024-25, while Indonesia's economy will continue to expand by between 4.7-5% per annum over 2023-24. Growth in many other emerging-market

economies, including Brazil and South Africa, is projected to be sluggish over the next two years, at about 1% per year on average. Economic growth in Turkey is being hampered by the recent earthquakes, but will recover as reconstruction spending picks up, with predictions of full year growth of 2.8% in 2023 and 3.8% in 2024. Output in Russia is expected to decline this year and next, as the drag from economic and financial sanctions starts to build liabilities and external revenues.

### Developing economies face an uncertain future

The slight improvement in the major economies is not reflected in the prospects for many developing countries. Many emerging-market economies are facing increasing difficulties in servicing elevated debt and deficits as global interest rates rise, especially in commodity-importing economies or ones in which there is a mismatch between the currency composition of liabilities and external revenues. Quantitative easing and excess global liquidity in the decade before the pandemic were associated with sharp increases in external debt in a large number of developing countries.

Average GDP per capita in Africa and Latin America and the Caribbean is projected to grow only marginally, reinforcing a longer-term trend of stagnating growth performance. Through this year and the next, growth is expected to remain well below the average rate of 3.1 per cent registered during the two decades before the pandemic. Low investment growth, high external debt burdens and vulnerabilities, unpredictable geo-political and climate risks will all lead to a prolonged period of poor growth prospects.

The shift to quantitative tightening, along with higher interest rates, is exerting downward pressures on exchange rates of many developing countries, especially those facing the risk of capital outflows, adversely affecting balance of payment and exacerbating their debt sustainability risks. Low economic growth and increasing financing constraints will further limit the ability of governments to invest in education, health, sustainable infrastructure and energy transition to accelerate progress towards sustainable

development. Low-income economies are particularly at risk of debt distress. IMF (International Monetary Fund) debt-sustainability analyses for low-income countries suggest that over half of the 69 economies assessed were either experiencing debt distress or at high risk of distress as of January 2023.

### Light at the end of the tunnel

With global economic growth slowing, energy and food price inflation subsiding, and monetary policy tightening by most of the major central banks, consumer price inflation is expected to moderate. Headline inflation is projected to decline in 2023 and 2024 in almost all G20 economies. Even so, annual inflation will remain well above target almost everywhere through most of 2024. As countries battle crises on multiple fronts, it is crucial not to overlook the long-term challenge of improving their resilience to future shocks in order to achieve sustainable and consistent growth. One of the biggest future shocks is likely to come from climate change, which imposes large economic and social costs and every country needs to plan for the challenges ahead.

After the turbulence of the last three years there are signs that the storm is abating and we are over the worst. Even during these unprecedented times many companies have refocused, adapted and not just survived but thrived. These companies are now stronger, more resilient, more efficient and better equipped to grow in the future. Some companies and market sectors will be changed forever, but constant change, thinking ahead and managing risk is a fundamental attribute of any successful business. Printing has undergone enormous change over the last twenty years with the migration to digital print and digital media services, which proves its resilience and ability to adapt to fluctuating market demands in the future.

#### Sources:

OECD Economic Outlook  
 United Nations Global Economic Outlook  
 Pimco Secular Outlook -The Aftershock Economy  
 International Monetary Fund - World Economic Outlook  
 McKinsey & Company - Economic Outlook 2023

# 9th drupa Global Trends Report 2023 - The full report

## Economic Assessments

### Printers

After the shocks from the Covid pandemic, it was pleasing to report a positive view from Printers of their own companies' economic condition last year. This year is even better with a significant further improvement in sentiment amongst printers and very positive forecasts for 2024.

Before we consider the data in more detail, let us explain a little more about the data, how it is presented and how to read the charts that follow. The survey was conducted in May and June of this year. Without the opportunity of drupa in 2020 to top up the expert panel, there has been an inevitable decline in the number of participants. So, we conducted a modest recruitment exercise from existing lists and there has been an encouraging partial recovery in panel numbers. Nevertheless, some data sets are too small to use and others are marginal. The full breakdown of participants by region and market

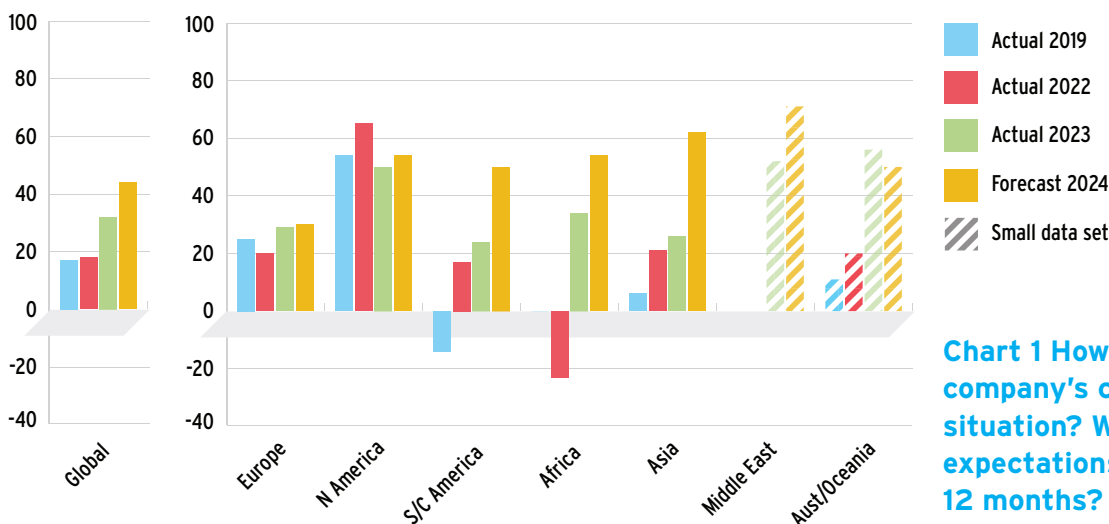
is in the Appendix as in previous years. However, as last year, for complete transparency, where we include a marginal data set, we will highlight this both in the body of the text and in any associated chart. The reader can decide then for themselves how best to assess that particular result<sup>2</sup>.

Let us now turn to how the data is shown in many of the charts. If you look at Chart 1 and the Global data set, the green column is the 2023 data set. 44% of the sample stated their company's current economic situation in their own companies was 'good', and 12% described it as 'poor' while the remaining 44% described it as 'satisfactory'. The net positive balance of +32% i.e. 44% minus 12%, is the overall result shown in the chart, which is 14% better than in 2022. It is this net positive or negative balance that is shown in many of the charts that follow.

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### drupa Printer Barometer 2023 economic confidence 2022 by region

% net balance positive v negative



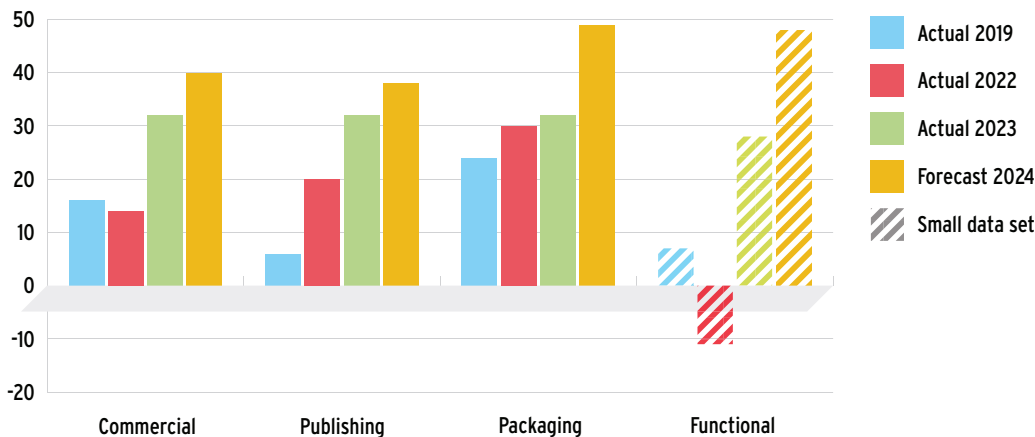
**Chart 1** How do you rate your company's current economic situation? What are your expectations for the next 12 months?

Most regions show a clear improvement in sentiment in 2023 and even stronger for 2024 against both 2019 and 2022, though there are interesting exceptions. Europe whilst showing better figures does not show the same leap in confidence for 2024 as elsewhere. Indeed, Germany's figures are flat for 2023 against 2022 (+12% each year) and go down to +4% for 2024.

North American (N. American) sentiment peaked in 2022 and has fallen since and there is only a modest recovery forecast for 2024. South and Central America (S/C. America), Africa and the Middle East have all recovered strongly. Asia has gained confidence each year since the poor result in 2019.

### drupa Printer Barometer 2023 economic confidence by market

% net balance positive v negative



**Chart 2 How do you rate your company's current economic situation? What are your expectations for the next 12 months?**

Turning to market sectors<sup>3</sup>, Packaging printers have shown the greatest economic confidence for some years, and the experience of high demand during the COVID19 pandemic strengthened their belief. What is more striking is the recovery in confidence amongst Commercial and Publishing companies. This will be a theme to this year's report that we will return to, but it is important to note that if sustained, it signals that printers in both market sectors appear to have weathered the heaviest impact of digitisation, found their revised roles in their specific markets and can plan ahead with some confidence. The blip in confidence reported last year from our admittedly small sample of Functional printers cannot be explained and must be put down to the sample size.

While the recovery in economic confidence amongst Publishing printers is to be applauded, we must comment further. As already stated, since drupa 2016 i.e., the last face-to-face event, overall participant panel numbers have drifted down inevitably. Nevertheless, participant numbers have held up proportionally for Commercial [51% of panel in 2016 and 43% in 2023] and Packaging

3. **Commercial** includes Direct Mail, Business Forms, Security, Wide-format, Trade Finishing for Commercial work, Transactional, Photoproducts **Publishing** includes Newspapers, Magazines, Catalogues, Conventional book production, Short-run digital books, On-demand digital books, Trade Finishing for publications **Packaging** includes Labels, Cartons & Carton Board, Flexible Packaging, Corrugated/Secondary, Rigid, Point of Sale/Point of Purchase/Banners **Functional** (Industrial/Decorative/Textile) includes Printed electronics, 3D products, Ceramics, Textiles, Wall coverings/ Other Decorative Printing.



[41% in 2016 and 37% in 2023]. But Publishing numbers as a proportion of the total have dropped substantially - 30% in 2016 and just 15% in 2023. The overall sample size is very healthy, so this drop is very significant. Whether this is due to printers migrating to other market sectors or even ceasing to trade or both, we cannot tell. However, it is important.

Before moving on to supplier confidence, the authors would like to quote a couple of printers' replies to the question, 'What is the biggest opportunity for your company in the next 12 months?'

*"LUCK!" Packaging printer, Spain*

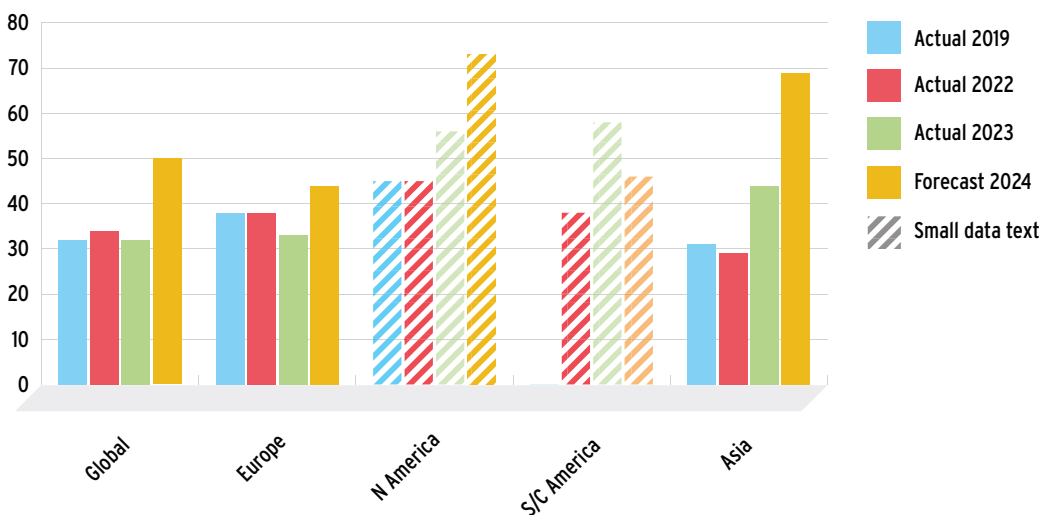
*"Optimism, Truth, New business models" Commercial printer, Spain*

## Suppliers

Turning to the Suppliers, economic confidence in their own companies has been positive throughout the period from 2019 on. Globally the net positive reported has been fairly static since 2019, though there appears to be very positive expectations for 2024 - a drupa 2024 effect? All the regions shown have reported strong expectation for a better result in 2024, with the exception of S/C. America. It is worth noting that unlike the rest of Europe, the result for German suppliers, while still positive at +25%, was 6% lower than last year. The very positive forecast for North America is inconsistent with the more cautious views of their printers, a topic we shall return to later. The sample sizes for Africa, Middle East and Australia/Oceania were too small to report.

### drupa Supplier Barometer of economic confidence 2023

% net balance positive v negative



**Chart 3 How do you rate your company's current economic situation? What are your expectations for the next 12 months?**

In terms of market sectors, Functional and Packaging suppliers have shown the greatest

confidence since 2019 but it is good to report that forecasts are positive for all sectors.

## drupa Supplier Baromete of economic confidence 2023 by market

% net balance positive v negative

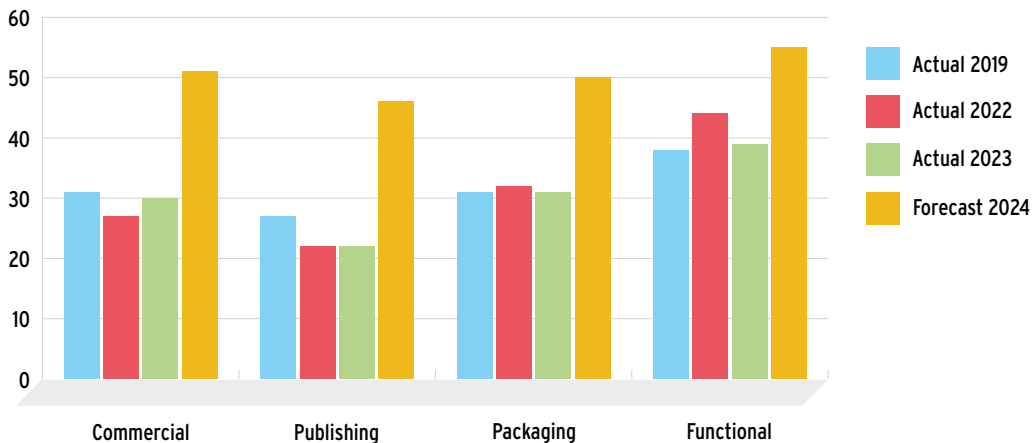


Chart 4 How do you rate your company's current economic situation? What are your expectations for the next 12 months?

### Trends over time

A huge advantage that the drupa Trends report has is the ability to track important trends over time with data back to 2014 (although remember we suspended the surveys

during the pandemic). If we look at economic confidence of printers by region since the last face-to-face drupa in 2016, we see that globally confidence was falling in 2019 i.e. before the pandemic, then a very modest improvement last year and now a clear boost in confidence.

## Printer economic confidence over time Global and regions

% net balance positive v negative

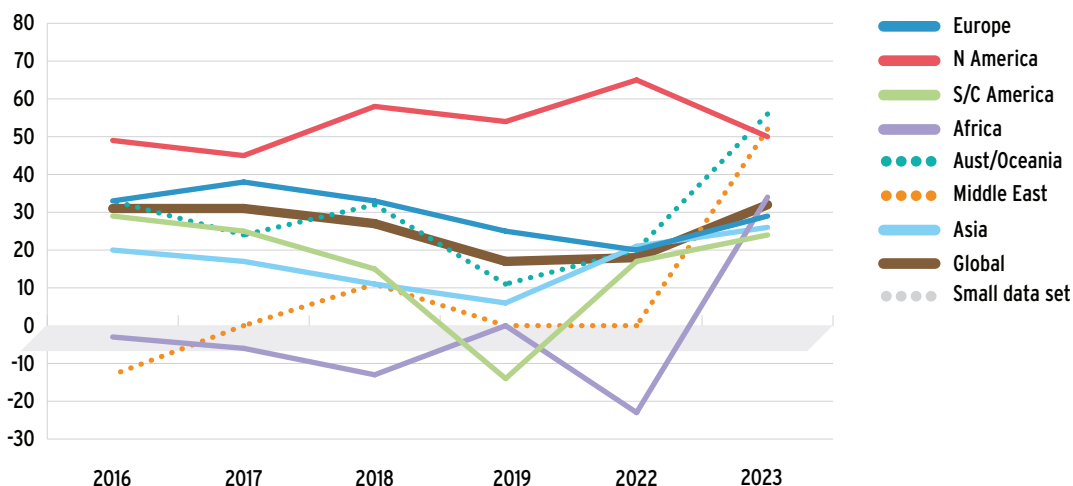


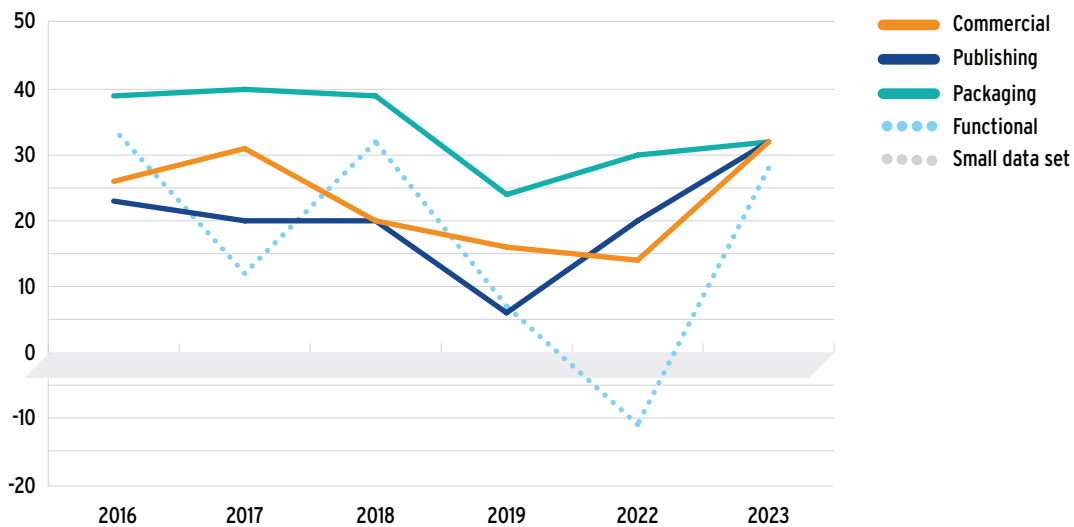
Chart 5 How do you rate your company's current economic situation? What are your expectations for the next 12 months?

Looking at individual regions we see a modest dip in N. American confidence this year, though still showing remarkable resilience. Africa has been at the bottom of the set for most of the period but shows clear improvement this year. The Middle East (small sample) shows an encouraging improvement as does S/C. America. Australia/Oceania (small sample) signals much improvement and Asia steady improvement from the low of 2019.

Turning to markets, Packaging printers have maintained good confidence throughout the period with just a dip in 2019, while it is very pleasing to show the clear recovery in confidence of Commercial and Publishing printers. The unexpected and unexplained dip in Functional printer confidence last year is reversed and we must suspect it was largely down to the small sample size.

### Printer market economic confidence over time

% net balance positive v negative



**Chart 6** How do you rate your company's current economic situation?  
What are your expectations for the next 12 months?

# Financial performance measures

## Printers

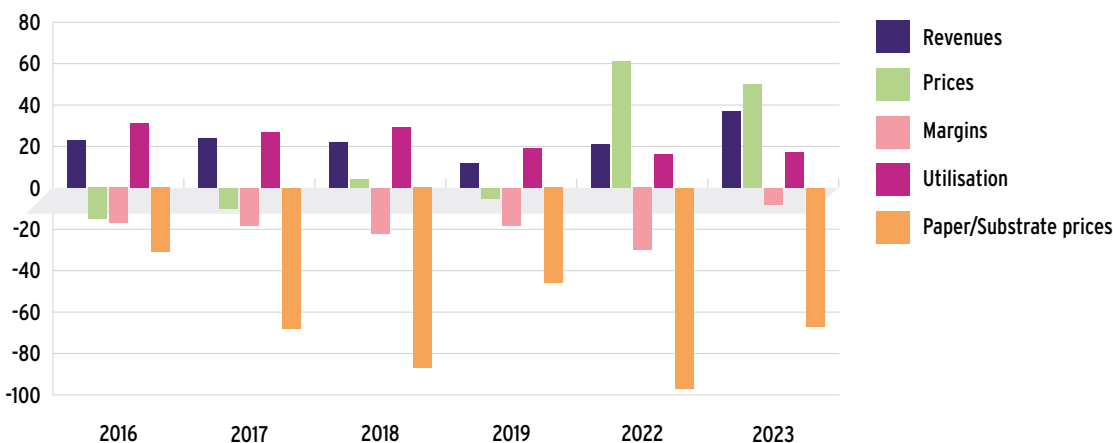
Last year we started this section with the shock headline “Printers raise prices!” Well, they have done it again. Will this become a habit? We think we may be reporting a major shift in the financial dynamics of the industry. Not only did printers report prices up (+50%) for the second unprecedented year, but revenues rose (+37%) by the largest figure by far since we started the drupa Trends reports in 2014. Then again, the net negative decrease in margins at -8% is the smallest ever reported by far. (Remember these charts show the % net positive or negative balance for those reporting a rise or fall in the specific variable - discounting those that report no change.)

We puzzled last year over the reasons for the radical change in behaviour.

*“Did the Covid pandemic somehow give them the confidence to say, ‘sorry customers, but prices must go up’ or is it the sheer scale of paper/substrate prices that have forced the printers’ hands? And is this a one-off result or the beginning of a more assertive industry? And what are the inflationary implications if other industries follow the same pattern?”* Well, the behaviour was maintained for a second year and we know the answer to the last question at least. Serious inflationary pressures are present and governments across the world are struggling to bring prices under control, whilst trying to avoid a recession. Time will tell if the new assertive financial performance of the industry will survive such pressures or whether the industry will return to the pre-pandemic defensive pattern.

### Global printer financial performance over time

% net balance positive v negative



**Chart 7** How have your company’s revenues/prices/margins/utilisation/substrate prices changed over the last 12 months?

The pattern is not universal, though all regions reported raising revenues and prices significantly. Some such as Europe and S/C. America have seen margins squeezed. Yet Non-Europe, i.e. the rest of the world, enjoyed better margins overall (+20%).

Utilisation also varied between regions (range -12% Germany to +37% Africa). Substrate prices were universally up (range -47% S/C. America to +88% Germany)<sup>4</sup>. The pattern holds well across markets as evident in chart 8.

## Printer financial performance over time by market

% net balance positive v negative

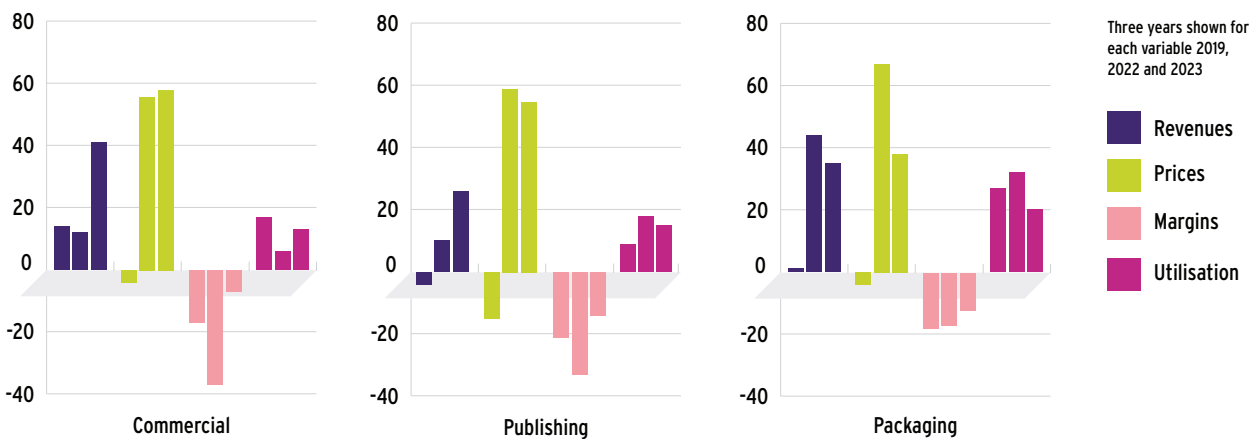


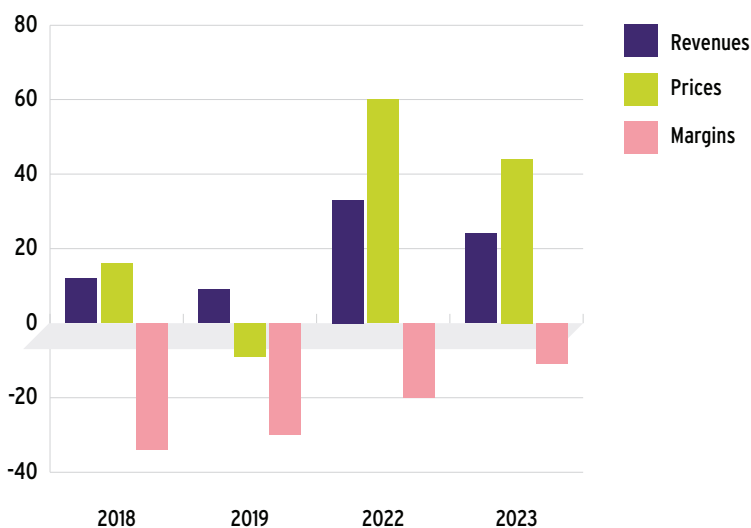
Chart 8 How have your company's revenues/prices/margins/utilisation changed over the last 12 months?

## Suppliers

It is a similar story from the suppliers with prices (net +44%) and revenues (net +24%) up at previously unseen levels and margins improved in consequence (net -11%). Again, the pattern is

true for all regions, albeit the range for margins is wide (S/C. America -25% to Asia -3%). The same remark must be made about the possible consequences for inflation and even recession.

4. We report on paper/substrate prices from the perspective of printers.



## Global supplier financial performance over time

% net balance positive v negative

Chart 9 How have your company's revenues/prices/margins changed over the last 12 months?

# Operational measures

## Printers

The industry continues to use a huge variety of print technologies. We give the global picture for all technologies in the Appendix. Chart 9 shows the picture for the main technologies in 2023 in total and by the three main markets. Remarkably, Sheetfed offset at +6% shows positive net increases across all markets (range 2% Commercial to 15% Publishing).

Flexo shows great growth in Packaging (+15%), and Digital toner cutsheet mono has a similar growth in Publishing (+15%). Digital toner cutsheet colour shows the greatest overall increase for any technology at +18% (range Packaging +4% to Commercial +31%). In inkjet, wide format leads +10% total (+15% Commercial), followed by cutsheet colour at 8% (+11% Commercial) and then Rollfed colour at 5% (+6% Commercial).

### Print volume by technology 2023

% net balance positive v negative

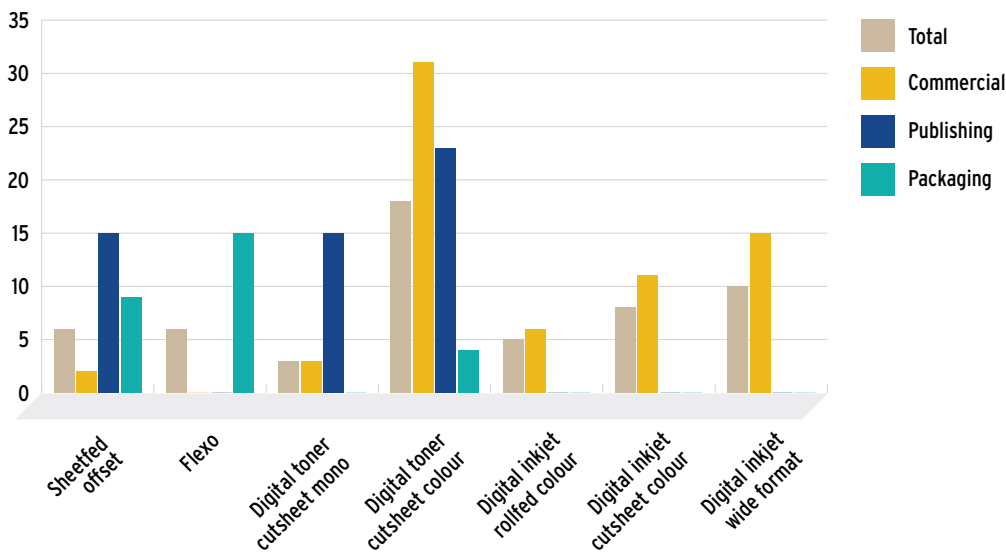


Chart 10 How would you assess your printing volume in the following technologies over the last 12 months?

The resilience of sheetfed offset is remarkable. Table 1 shows the pattern since 2018 by the three core markets.

	Sheetfed offset volume by year			
	% net balance positive v negative			
	2018	2019	2022	2023
Commercial	-6	-2	-21	2
Publishing	9	-1	-5	15
Packaging	17	7	18	9

Table 1 How would you assess your printing volume in the following technologies over the last 12 months?

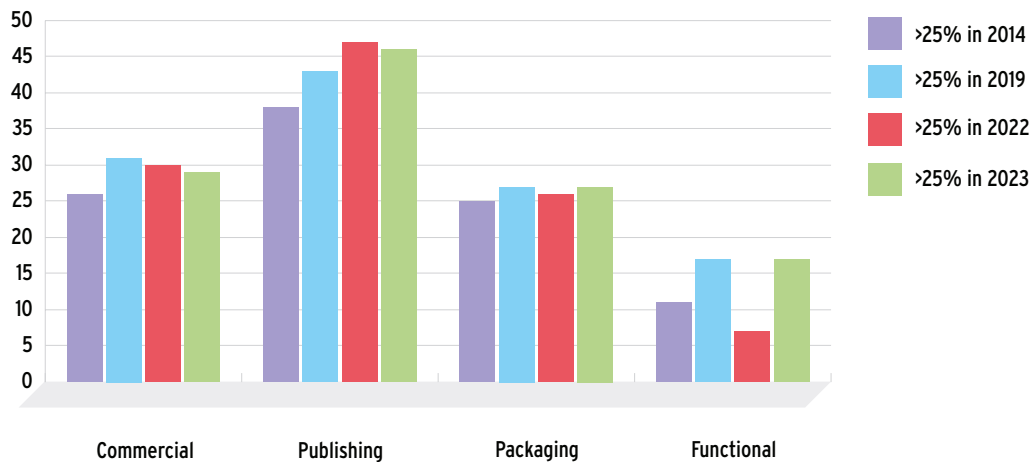
Since 2014 we have tracked the growth of digital print as a % of total turnover. This appeared to stall over the pandemic period, but it was unclear if the growth would restart this year. The clear answer from Chart 11 is not yet! However, it must be added that when asked why they would be attending drupa 2024, many respondents stated it would be to look at new digital print options.

*“Yes, I will be attending drupa 2024. Specifically, we are looking for a printer solution to transition more offset to B1 digital that is cost and performance effective. Also, we will be looking at technology improvement in wide-format in both flat sheet and rolled printers.”*

**Commercial printer, Australia**

### Digital print as % of total turnover by market over time - % of printers with more than 25% of turnover digital

% net balance positive v negative



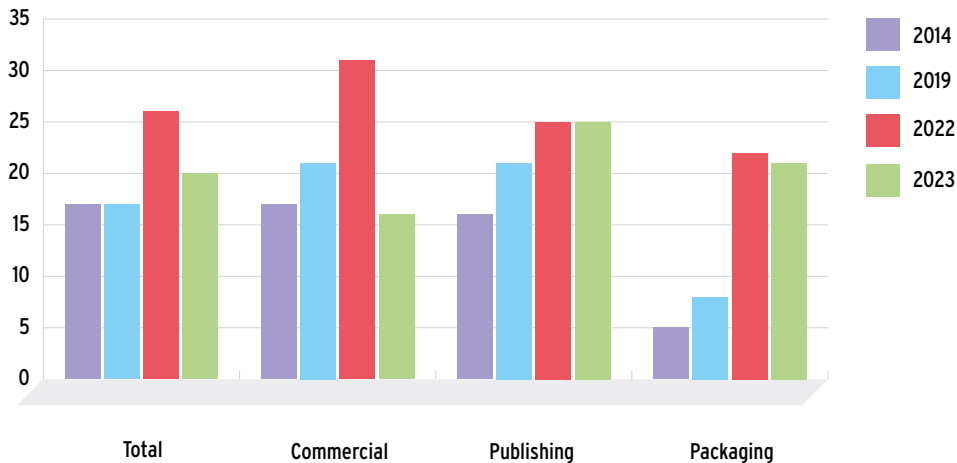
**Chart 11 What % of turnover was digitally printed in the last 12 months?**

E-commerce is a daily part of life for many. Yet the growth of web-to-print installations amongst our substantial panel is glacial. Back in 2014, 25% of the total panel reported they operated a web-to-print installation. The figure in 2023 - still 25%. Commercial 2014 36% and 2023 36%; Publishing 2014 27% and 2023 30%; Packaging 2014 14% and 2023 19%. Clearly some regions use less e-commerce for cultural, technical and other reasons e.g. Middle East and Asia. But the growth is modest even where e-commerce is part of day-to-day living e.g. Europe and N. America.

Last year we reported that those that did operate web-to-print had experienced a surge in demand via that platform - globally up from c.17% in previous years to 26% in 2022. The figures quoted being the proportion of those that operate web-to-print who received more than 25% of their turnover by that means. Was this the web-to-print breakout? Apparently not, as the total has fallen back to 20% this year. Publishing held steady at 25% and Packaging at 31% but Commercial dropped from 26% last year to 20% this year.

## % of those with web-to-print with >25% turnover from W2P

% net balance positive v negative



**Chart 12 What % of total turnover by value was handled by Web-to-Print over the last 12 months?**

Employment levels globally are growing - net positive balance of 7% reporting an increase (range -6% Australia/Oceania to +38% Middle East). German printers reported -21%. Not surprisingly, the biggest fall was among Publishing printers at -8% with Packaging at +9% and Commercial at +10%.

Labour shortages were reported globally by about half of respondents (range Middle East 38% to N. America 61%). Finishing staff were quoted as being the hardest posts to fill (67%) followed by Conventional print operatives at 59%. The shortage of conventional printing operatives was highest by far amongst Packaging printers at 72% versus c.52% for other markets; a reflection of their sustained need for greater capacity. But the shortage of finishing staff was universal across all markets at c.67%, creating pressure for more automation.

*What is the biggest challenge for your company in the next 12 months? "Getting the right employees."*

**Commercial and publishing supplier, Netherlands**

After a dip last year, the proportion of printers reporting they export recovered to 47% in 2023. By market it varies - 71% Packaging, 44% Publishing, 32% Functional and 30% Commercial. Export levels were reported as broadly stable.

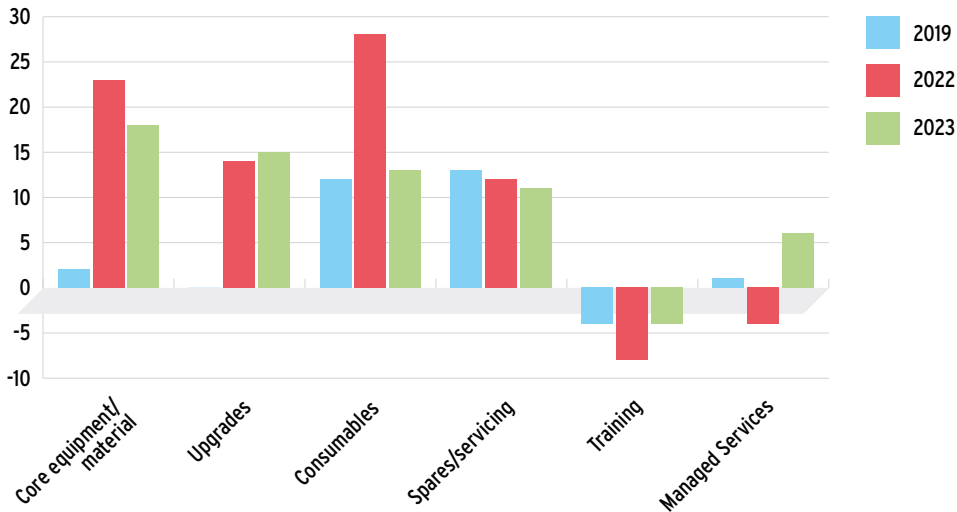
Supply chain difficulties have continued - a legacy of the pandemic plus all manner of other strategic challenges. But it is clear that printers expect the worst is over. 63% reported significant difficulties in 2023 (range 82% N. America to 42% Asia) but only 14% expect these to continue in 2024. Substrates were the most difficult to obtain 49% (range 75% N. America to 45% Europe) followed by Consumables at 43% (range 61% N. America to 36% S/C. America).



# Suppliers

## Supplier Revenue Mix

% net balance positive v negative



**Chart 13 Overall for your region(s) how has the proportion of revenues changed over the last 12 months**

Patterns of trading are returning nearer to normal for suppliers. The post-Covid bounce in consumables is over and core equipment installations/materials fell back modestly.

Employee numbers globally were flat (+1%), with Europe -1% and Non-Europe +12% (range Asia -14% to N. America +20%). 39% reported labour shortages (range 27% Europe to 58% S/C. America). Manufacturing staff and technical support were the stand-out shortages, both at 59%.

Post-Covid supply chain difficulties continued, but were slightly less severe than last year. 81% reported shortages last year, 73% in 2023. Raw materials and parts being the biggest headaches.

Just 19% expected supply chains to be a major issue in 2024, although 75% expected there to be continuing difficulties in accessing spare parts.

Marketing budgets are forecast to grow in 2024 +31% globally, range +23% Europe to +52% Asia. Expenditure net growth was by market 45% Functional, 33% Commercial, 31% Packaging and 25% Publishing. Trade shows led the growth list at +35%, up from +17% in 2022, reflecting both the recovery of face-to-face events post-Covid and drupa 2024! Next came Online content/education at +28% and then Product training at +25%.

Given the global nature of most supplier supply chains, we do not attempt to track supplier exporting trends.

# Capital expenditure

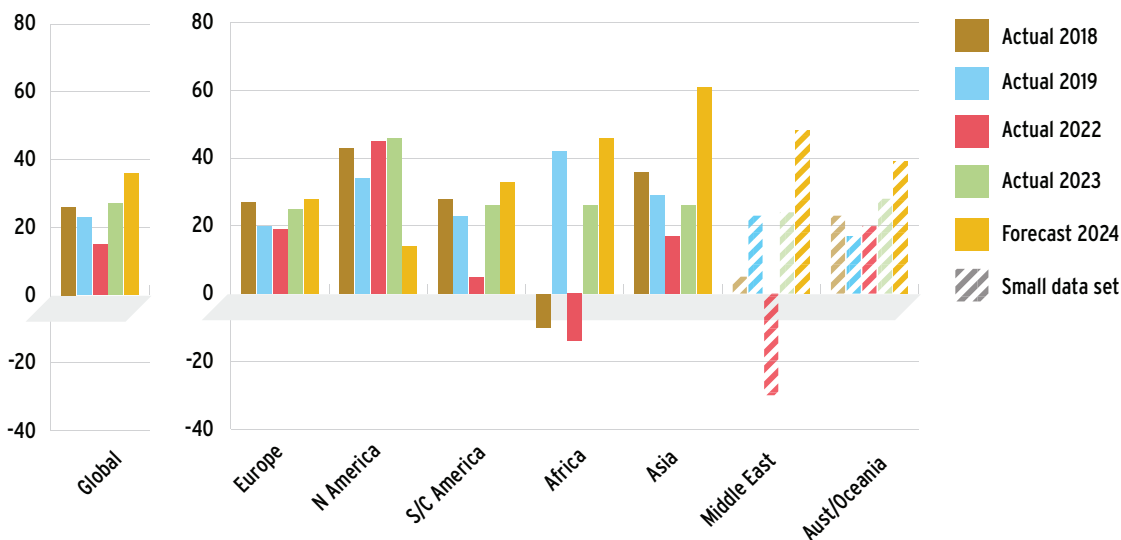
## Printers

We know from feedback that this section of the Trends report series is read with great enthusiasm by printers and suppliers alike. Chart 14 shows a longer time period than most, as we wanted to demonstrate that expenditure started falling

from 2018 on, well before Covid. Last year actual expenditure post Covid was inevitably low, but the forecast was for a strong recovery in 2023. That is exactly what we see this year with all regions reporting a positive net balance - globally +27%.

### Printer Cap Ex - Global and by region 2032

% net balance positive v negative



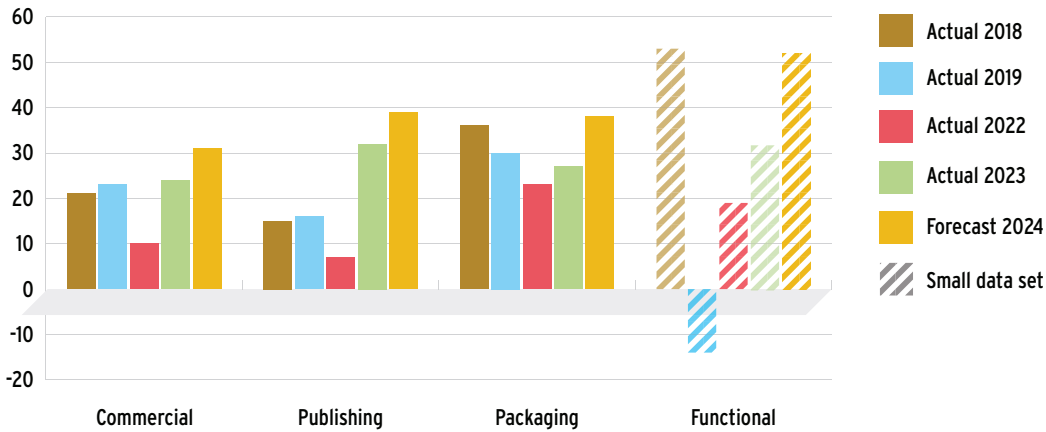
**Chart 14 How has capital investment changed over the last 12 months?  
Over the next 12 months will your company's capital investment...?**

All regions show an increased net positive balance for 2023 (Africa and the Middle East most striking) and all but N. America show expectations of higher expenditure in 2024 - led by Asia. The striking exception is N. America, which for years

has maintained a remarkably consistent positive picture for most measures, but shows a clear loss of confidence for 2024 for the first time in many years.

## Printer Cap Ex by market 2023

% net balance positive v negative

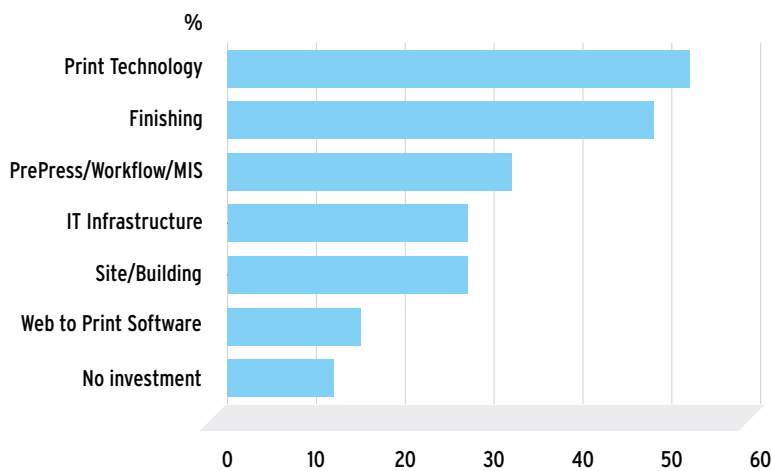


**Chart 15 How has capital investment changed over the last 12 months? Over the next 12 months will your company's capital investment...?**

The capital expenditure data by market, gives what we hope and expect is further evidence of a strategic confidence returning to both the commercial and publishing markets. Both show a strong boost to expenditure in 2023 and

strong growth forecasts for 2024. Functional also shows strong confidence - the 2019 result a clear anomaly. Packaging remains the strongest sustained market position.

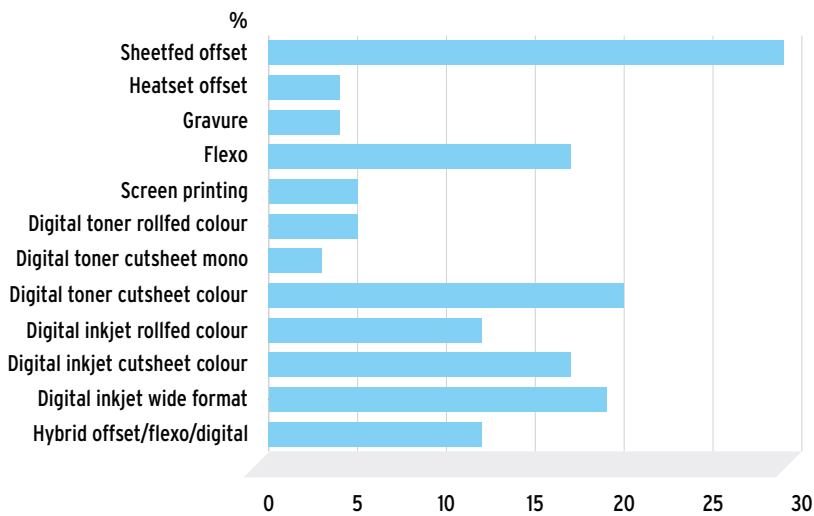
## Printer Cap Ex targets Global 2023



**Chart 16 In which areas does your company plan capital investment in the next 12 months?**

As usual print technology (52%) and finishing equipment (48%) are the strongest targets. Publishing printers, reversing the pattern, placed finishing first (45% to 38%). PrePress expenditure came next - strong in Publishing (38%).

### Global Print technology Cap Ex plans 2022

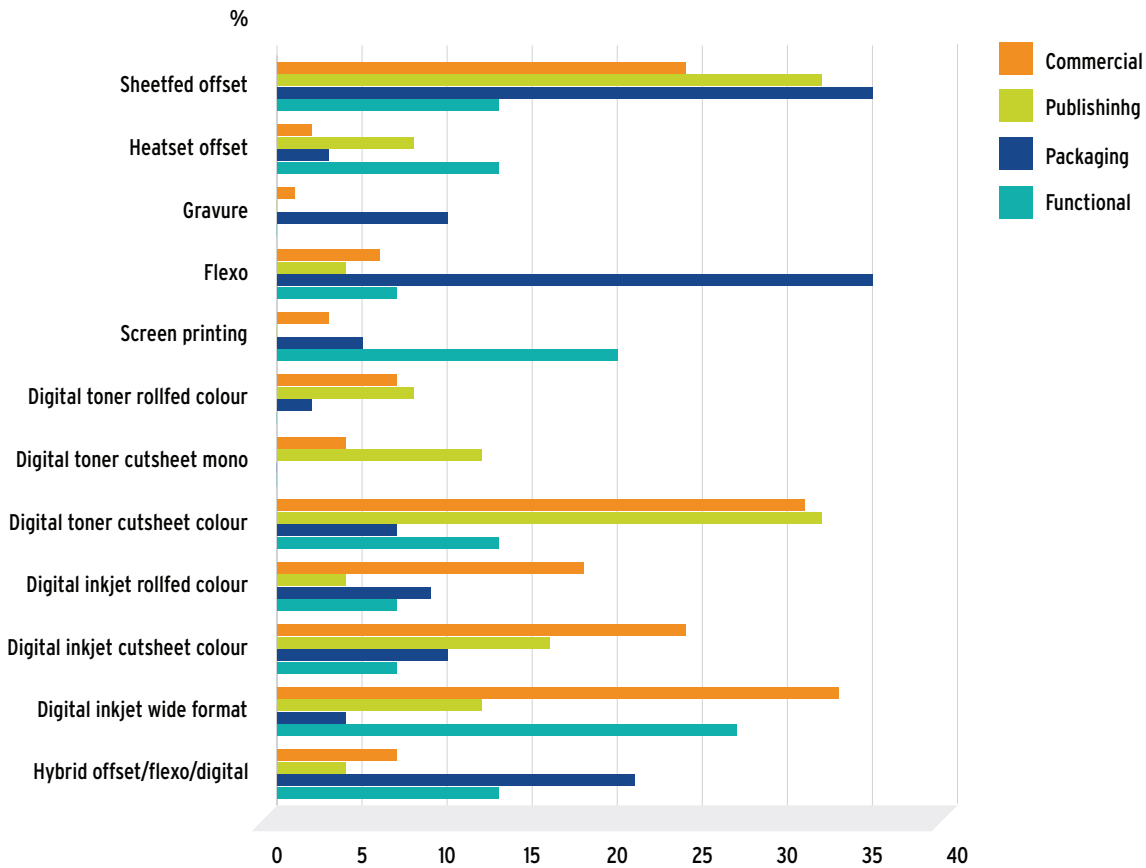


**Chart 17 In which of the following print technologies do you plan to invest in the next 12 months?**

The sheer variety of finishing equipment makes tracking investment patterns impractical. But we can do so for Print technology. Once again, Sheetfed offset maintains a strong lead globally over all other technologies (29%) with the nearest digital technology being Toner cutsheet colour at 20%. It should be noted that the

digital technologies added together outweigh 'conventional' print technologies. (The full table for all technologies is given in the Appendix. The chart above and next show those technologies where either more than 5% globally were selected, or more than 10% selected by a specific market.)

## Print technology Cap Ex plans by market 2023



**Chart 18 In which of the following print technologies do you plan to invest in the next 12 months?**

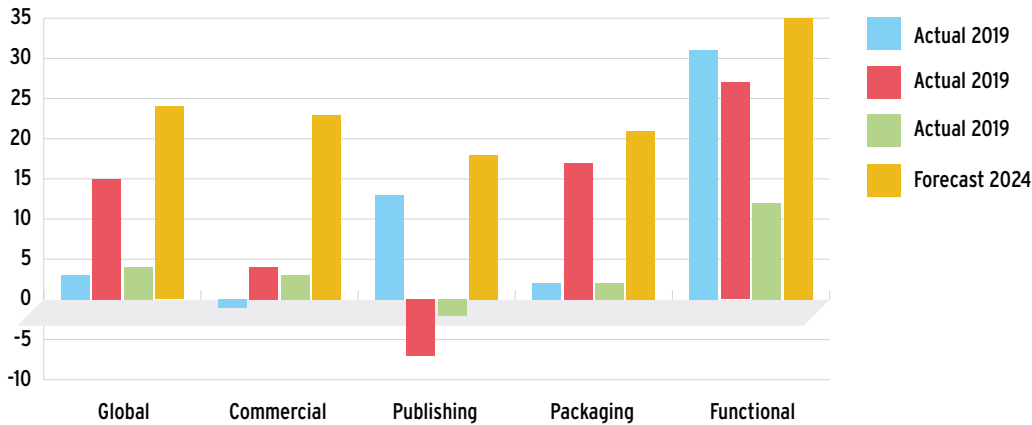
Chart 18 shows the wide variety of print technologies targeted by the different markets. Commercial printers placed Inkjet wide format first (33%) followed by Toner cutsheet colour (31%) then Sheetfed offset and Toner cutsheet colour joint third at 24%. Publishing printers placed Sheetfed offset and Toner cutsheet colour

equal first at 32% with Inkjet cutsheet colour third at 16%. Packaging printers selected Flexo and Sheetfed offset as equal first (+35%) with Hybrid next at 21%. Inkjet cutsheet colour came joint 4th with Gravure at 10%. Functional printers placed Inkjet wide format first (27%) followed by Screen print at 20%.

# Suppliers

## Supplier Cap Ex Global and by market

% net balance positive v negative

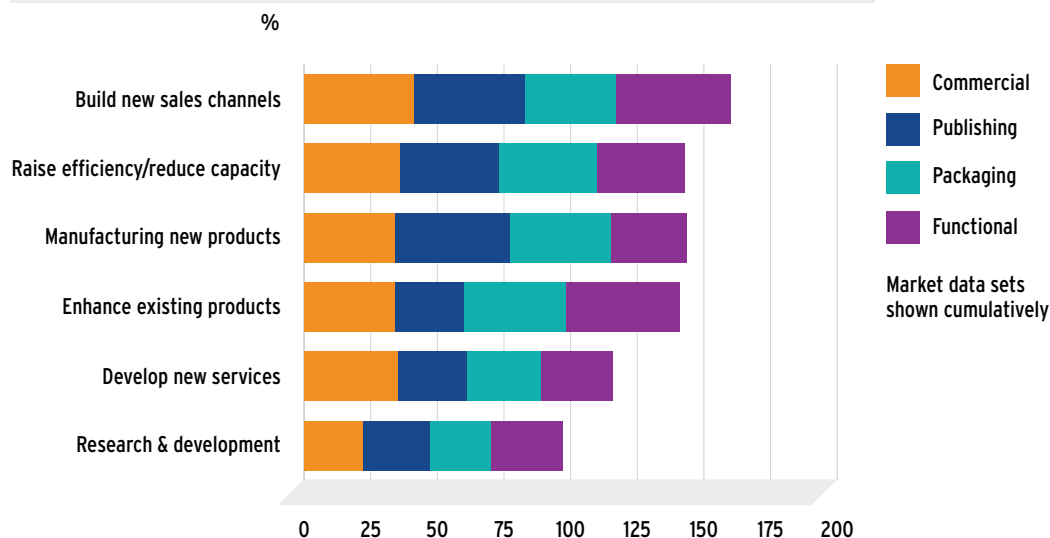


**Chart 19 How has capital investment changed over the last 12 months? Over the next 12 months will your company's capital investment...?**

Looking at Capital Expenditure targets for Suppliers, building new sales channels is most important (41%) with raising efficiencies next at 36% and developing new services at 35%. Product development comes a surprising 4th equal at 34% for both new products and enhancing existing products. Encouragingly both Primary and Secondary Research and Development were forecast to grow in 2024 (+29% and +31% respectively).

Yet the picture by market is more varied. Commercial has sales channels first and raising efficiency second. Publishing has new products first and sales channels second. Packaging has new products and enhancing existing products joint first. Functional has enhancing existing products and sales channels joint first.

## Supplier Cap Ex Total and by market 2023



**Chart 20 What are the two principal reasons for your overall capital investment plan?**

This being the build-up year before drupa 2024, we asked printers and suppliers a number of fresh questions to drill into the technological development/investment priorities for printers and the marketing priorities for suppliers. We were keen to find out if both parties shared the same sense of priorities and to have the chance to drill down into the answers in more depth so as to better understand what is driving those priorities. However, once you get onto this subject, it becomes clear you need to flesh out the raw data with additional commentaries from specialists and interviews with printers and suppliers with particular expertise in the topics addressed. Topics to be addressed include digital print as a core production method, faster more

efficient conventional print and finishing and end-to-end automation. However, this creates far too much content to be included in the Trends report. **So, we plan to publish a special Print Horizons report to be published in March 2024.** All participants in the 2023 Trends survey will receive a full copy.

We will take the opportunity of the Horizons report to give more space than normally possible in the Trends report to the increasingly important topics of Sustainability and ESG (Environment, Social and Governance).

# Strategic issues

## Diversification

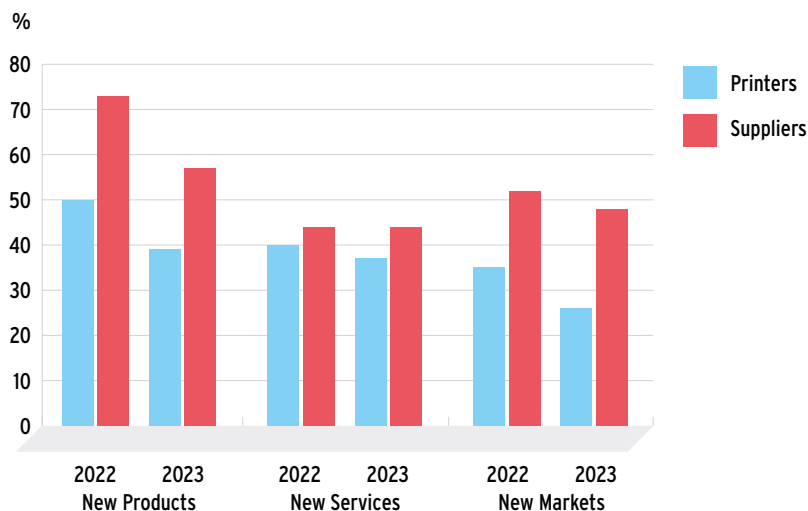
Diversification is a common theme in debate amongst printers and suppliers alike as they seek to grow revenues and spread risks in the face of challenging core markets. So, it is no surprise that both have maintained a high rate of diversification over the last two years. Increasingly these figures suggest such rapid developments are to be treated as business as usual.

What is the biggest opportunity for your company in the next 12 months?

*"New products"* Commercial, **Publishing and Packaging supplier, Belgium**

*"New markets"* **Commercial and Packaging supplier, Mexico**

### Diversification - Printer and Suppliers



**Chart 21 Has your company introduced major new products/services/entered new markets since 2019?**

Interestingly there are consistent regional differences e.g. N. American printers reported new markets and services both 50%, while C/S. America printers reported new products 29% and services 17%. Then again looking at markets, Functional reported new products 48% and services 44%, while Publishing reported products 27% and services 38%.

*"Move into roll-fed inkjet for longer run direct mail and higher volume commercial print jobs."*  
**Commercial printer, USA**

Last year we commented on the large number of commercial printers quoted as moving into Packaging markets and this is repeated this year.

*"As from 2014 we have started investing in packaging production, it has grown from less than 6% of sales to +/-35% now. This market will keep growing and we expect that over the next 3 years packaging will account for 60% of sales."*  
**Commercial printer, Mauritius**

*"Moving to Packaging products with special effects"* **Publishing printer, Saudi Arabia**



## Socio-economic conditions

When the Trends series started in 2014, we gave little attention to issues beyond the print market itself. However, the world and the survey have changed. The Covid pandemic, global supply chain challenges, physical wars e.g. in Ukraine and trade wars e.g. US and China: all have had a severe impact on printers and suppliers. Climate change waits in the wings with the potential to dwarf all other challenges.

Globally, economic recession takes top place this year at 47% (42% in 2022) with range 39% Asia to 52% N. America. The impact of pandemics dropped to second place at 41% globally (52% last year) with range 23% Africa to 67% Australia/Oceania. Beyond those two common concerns, different regions highlighted very different issues.

S/C. America respondents were concerned about Corruption 52%, whereas this scored 0% in Australia/Oceania. In Africa 51% highlighted currency issues but only 4% in N America. Australia 67% highlighted the impact of the Pandemic compared with just 23% for Africa. Environmental issues scored just 2% in S/C. America but 33% in Australia. Regional or wider political/trade wars score 29% in the Middle East but 0% in Australia. Physical wars were highlighted by 22% in Europe but 0% in S/C. America. Standards of living was chosen by 32% in N America but only 12% in S/C America. In comparison Political instability was chosen by 52% in S/C. America but, surprisingly to the authors, by only 4% in N. America.

*"For our company, the biggest opportunity will be bringing peace to our country."* **Commercial printer, Ukraine**

*"The current financial year is the worst in the last decade as it was coupled with the political instability and the economic issues that surrounds Pakistan. Our currency depreciated against the US dollars and as a result the cost of imports got up. The economic uncertainty prevailed the whole year and it is still going on. But we foresee positive indicators in the year to come."* **Packaging printer, Pakistan**

The results for Suppliers were so similar it is not worth showing the results separately. The only significant variances for suppliers were a lower assessment of Impact of pandemics (26% versus 41% for printers) and Currency crises in country or region (25% versus 15% for printers).

Interestingly, when asked which were more important, market or socio-economic factors, printer and supplier opinions were identical, with 46% that market and socio-economic conditions were of equal importance, 43% stating market pressures are more important, and 10% that socio-economic pressures are more important.

*"The biggest opportunity is to have political and economic stability in my country so I can be able to invest more in my printing business without any doubt."* **Commercial printer, Lebanon**

## Socio-Economic conditions impacting Printers by region 2023

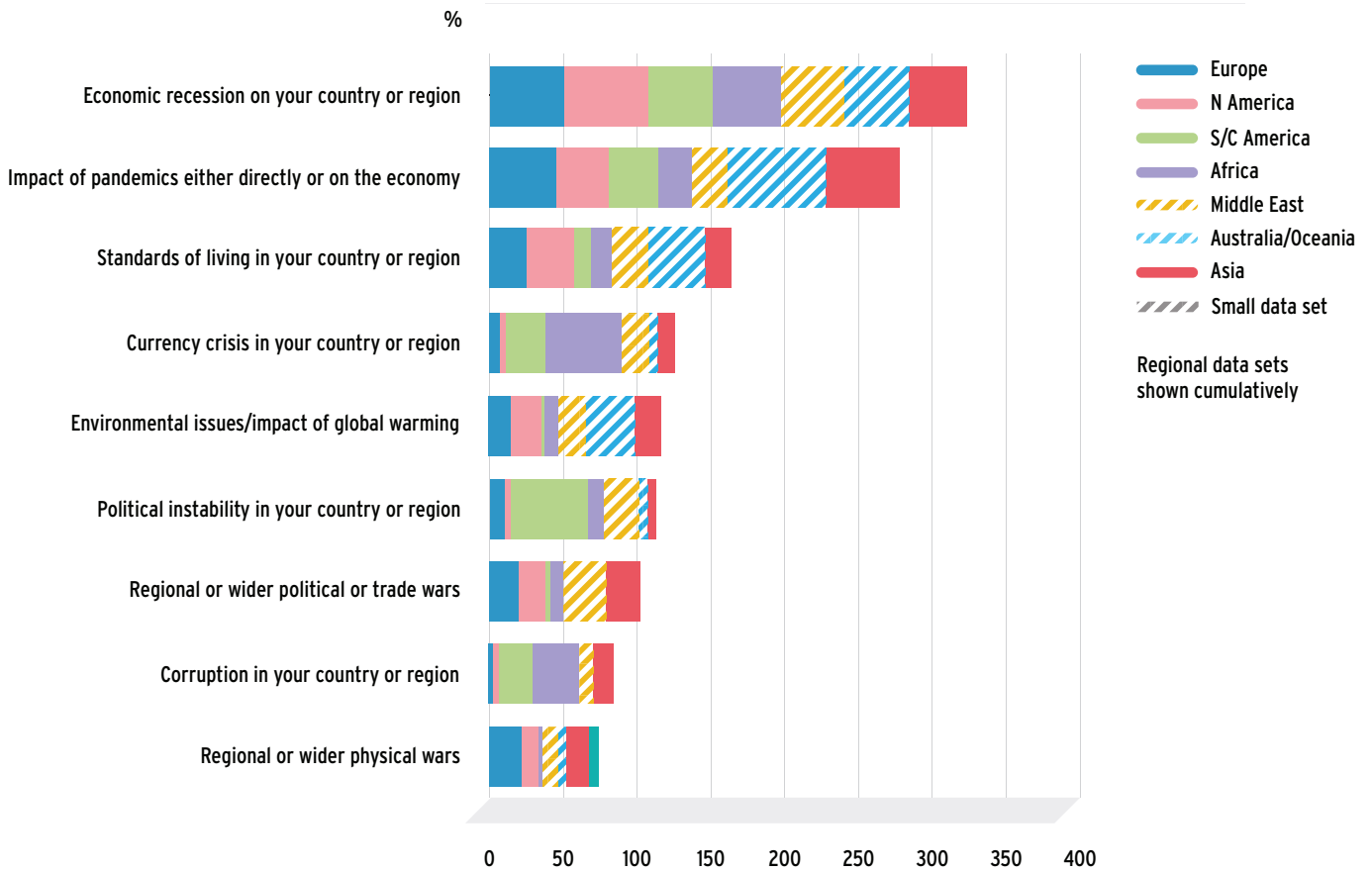


Chart 22 Which two of the following socio-economic issues are having the greatest impact on your print business?

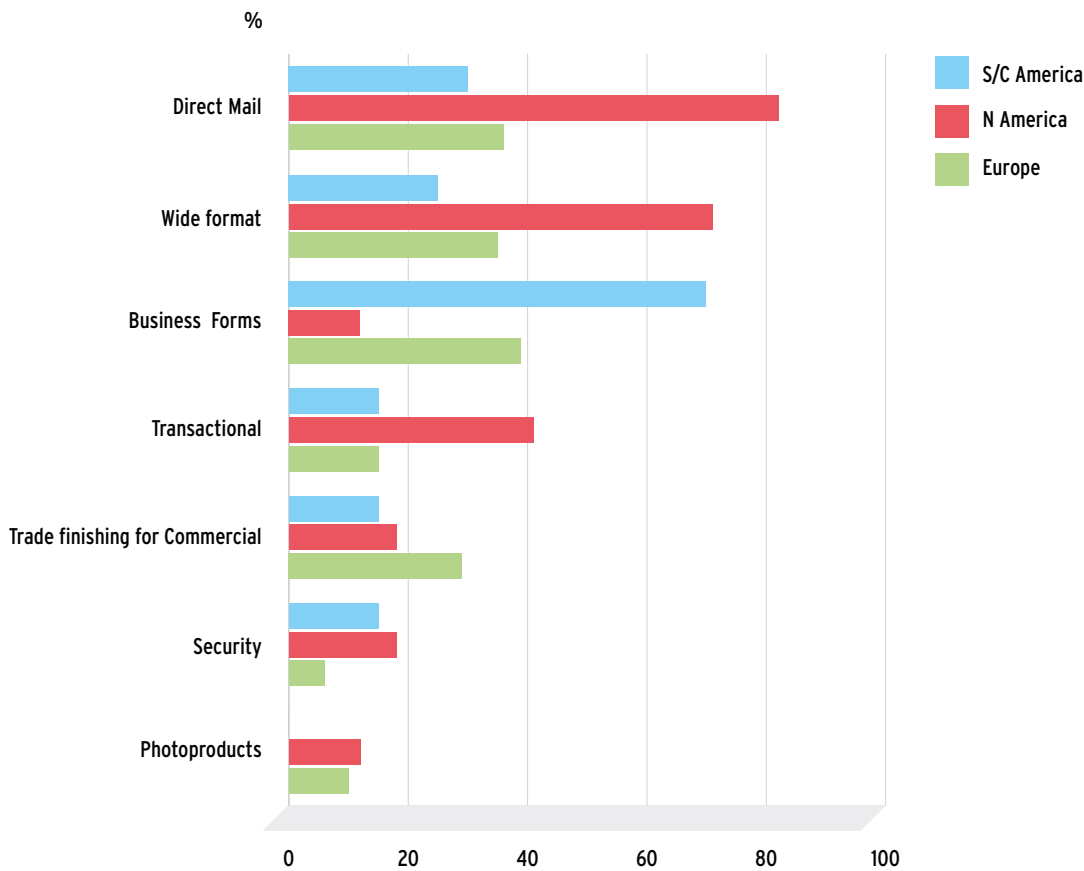
# Market specific trends

Last year we chose to focus questions on the impact of Covid and so as to avoid an overlong survey we dropped the market specific questions.

So, this is the first year since 2019 to ask these questions and it is interesting to report on any significant changes since then.

## Commercial printers

### Commercial markets by region



**Chart 23 Which of the following commercial markets do you work in?**

85% of Commercial printers offer 'General commercial print' (82% N. America). On average they serve 1.6 other markets: Direct Mail (38%), Wide format 37% and Business forms (36%) being the most common. But there are clear regional differences. N. America stands out with an average of 2.4 other markets served, compared with 1.6 for S/C. America and 1.5 for Europe. Specifically, Direct mail and Wide format are very common in N. America, whereas Business forms is very common in S/C. America.

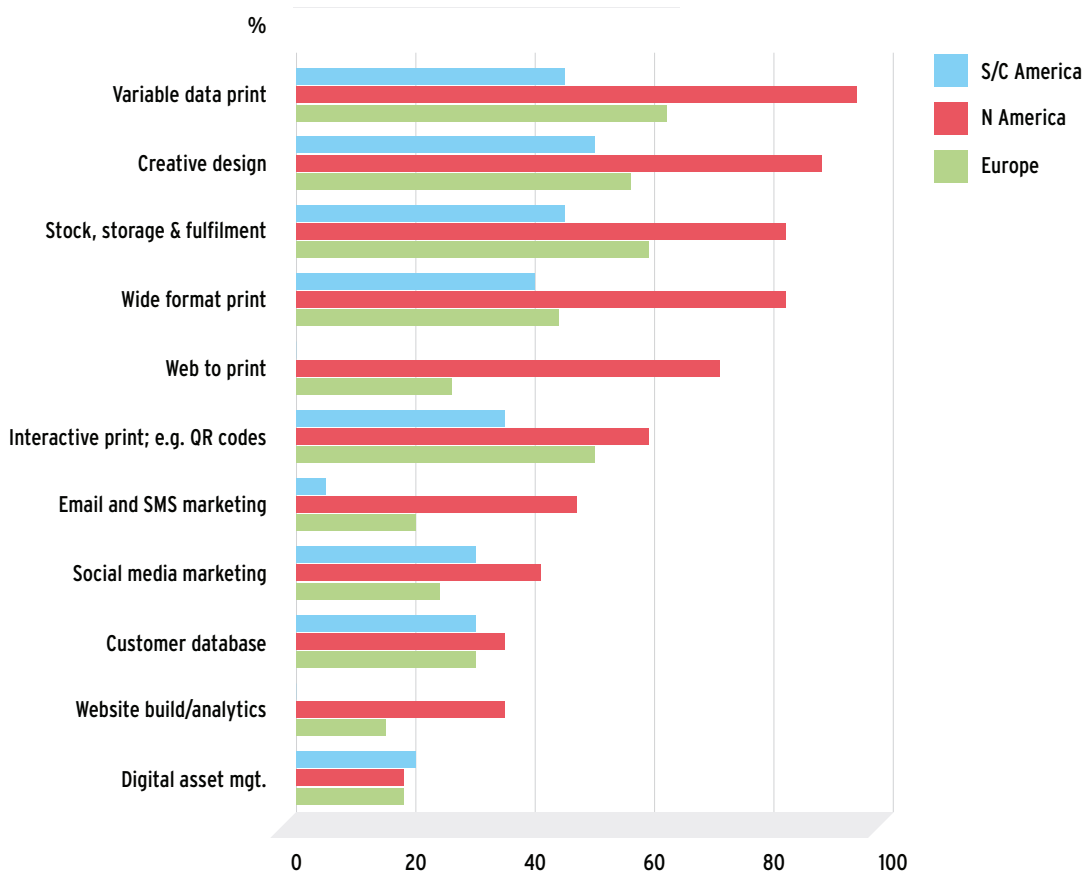
It is a similar story with the services offered. Globally commercial printers on average offer 4 of these services, but N. American printers offer 6.5, European 4 and S/C. American 3. The absence of internet related services in S/C. America is very striking e.g. 0% Web-to print and compares with the almost universal use of web services across Europe and N. America. Most common globally are Variable data print 62%, Stock storage and fulfilment 59% and Creative design 56%. Interestingly, three services are showing

clear growth since 2019. Social media marketing is up +7% to 28%, Stock storage and fulfilment up +10% to 59% and Interactive print e.g. QR codes up 19% to 51%.

*“The Biggest opportunity for us is to diversify into new markets, we have lost a lot of our core work through digitisation.”* **Commercial printer, Great Britain**

The most common finding from the open-ended quotes given by Commercial printers, is the need for diversification.

### Commercial services offered in-house



**Chart 24 Please indicate which of the following capabilities you have in-house.**

## Publishing printers

As reported at the beginning of this report, there is a very sharp decline in the proportion of printers stating that publishing is their primary market sector. Publishing numbers as a proportion of the total have dropped substantially - 30% in 2016 and just 15% in 2023. The overall sample size is very healthy, so this drop is very significant.

Since drupa 2016 globally the proportion offering Newspaper production has dropped by 10%, Magazine production by 23% and Catalogues by 15%. Yet book production has grown - Short-run production up by 9% and On-demand digital up by 15%.

*"[We are] developing print-on-demand books production. [We will attend drupa 2024 for] printing and finishing for short run books production."* **Commercial printer, Argentina**

*"We plan to increase our market share in the book on demand printing."* **Publishing printer, Italy**

### Publishing - market mix global over time

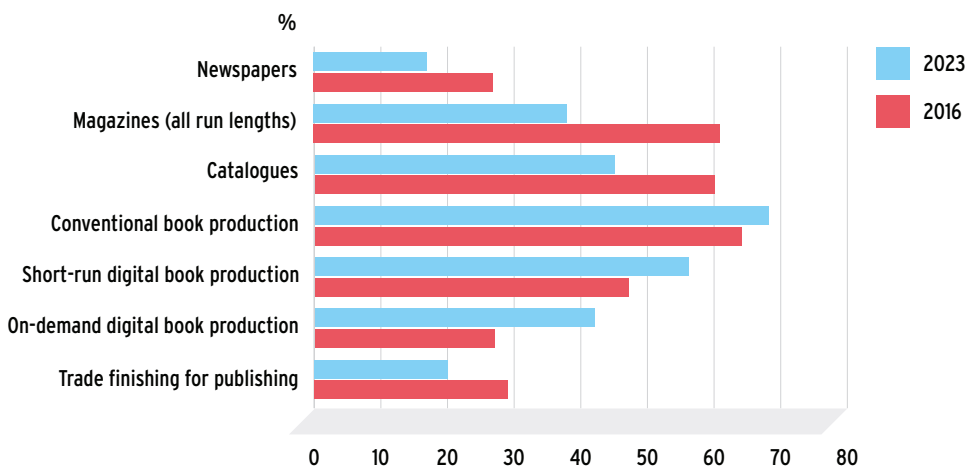
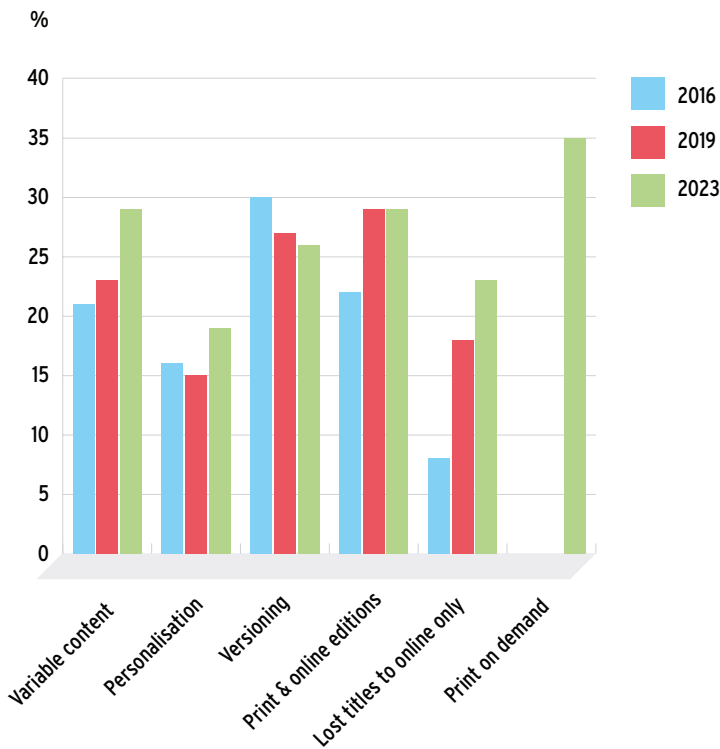


Chart 25 Which of the following publishing markets do you work in?

The impact of digital media is growing steadily over time, although the scale of impacts varies. So based on the proportion of printers reporting more than 5% of titles were affected; Variable content grows steadily, as does the number of Titles lost to online only editions, yet Versioning seems to be reducing in popularity and the demand for Personalisation (other than contact details) seems flat. Print on demand was added in this context for the first time in 2023.

*"We need to exploit all possible opportunities digital transformation offers (in marketing, customer acquisition and retention) by giving the best experience a customer can have from the ordering till the product delivery."* **Publishing printer, Greece**

## Impact of digitisation over time on Publishing printers



**Chart 26** What % of the publications you print have the following...?

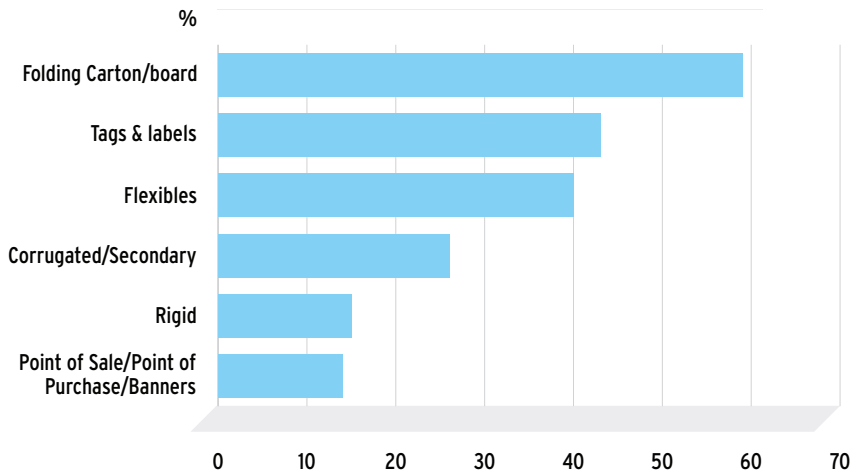
Another striking example of regional variances was on the subject of alternatives to plastic packaging. Globally 41% offer either compostable or biodegradable alternatives. In Asia it was 77% and N. America 0% (both small samples). In all cases the question was not applicable for about a third of the sample due to the nature of the product.

*“The changeover from poly packaging to paper/ paper sleeve packaging is the biggest opportunity for our company in the next 12 months.”*

**Commercial and Publishing supplier, Netherlands**

# Packaging printers

## Mix of packaging markets 2023

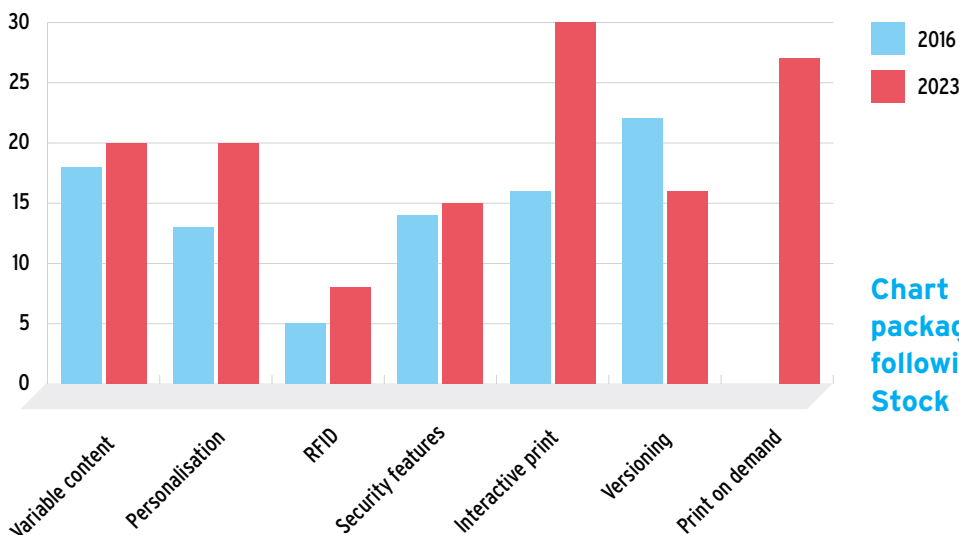


**Chart 27 Which of the following packaging applications do you produce?**

Folding cartons 59% is the most common end market for the sample, with Tags and Labels 43% and Flexibles 40% following. On average, Packaging printers report they serve two of the markets. We will save the complex topic of digital print for packaging to be explored in more depth in the Horizons report. For now, we will simply report that in most but not all markets there is good evidence that demand for digital print is growing.

Another question focussed on how widespread was the demand for added value elements in packaging. Most added value elements are growing more common with Interactive print almost doubling in demand since 2016. Versioning appears to becoming less popular. Print on demand was only asked about in this context for the first time in 2023.

## Added value packaging over time % printers reporting >5% of SKUs



**Chart 28 Does any of your package/label printing have the following elements? (SKU's - Stock Keeping Units)**

On the topic of alternatives to plastic packaging, only 24% stated they were not offering alternatives (14% stated the topic was not applicable to their products). Those offering alternatives were split fairly evenly between compostable, biodegradable and reusable/refillable alternatives. Interestingly this pattern was more or less repeated in all regions.

*“Capturing a new fresh produce labelling market with our compostable offering”*  
**Packaging printer, USA**

*“In the next 12 months the most important opportunity are new products we are introducing in the market to substitute plastics, with new designs and patented applications and mixing several kinds of materials and processes (cardboard, corrugated board, moulded pulp - offset, flexo)”*  
**Packaging printer, Brazil**

For flexible packaging printers, the search for alternative materials is even more critical. 26% have yet to make a move on the issue and

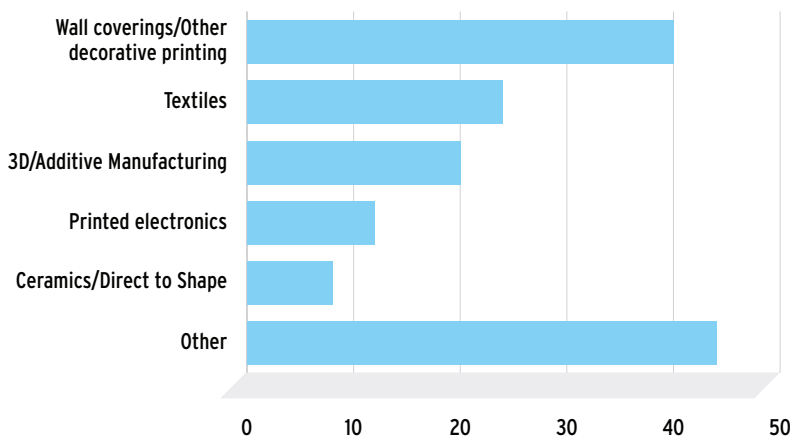
amongst those already addressing the issue, there was a fairly even split between compostable and biodegradable alternatives being developed/promoted.

*“Converting plastic packaging to paper packaging where it counts. A lot is happening in flexible packaging regarding barrier coatings and paper at the moment.”*  
**Packaging printer, Denmark**

## Functional printers

Sample numbers are small so we must be careful in how we interpret this data. And the range of products manufactured is very wide, as evidenced by 44% of the sample stating their market was not listed. We shall drill down into the key factors for growth in these markets in more detail in the Horizons report. For now, we will limit ourselves to reporting that this market sector is experiencing very rapid development and growing demand.

### Mix of functional markets served



**Chart 29 Which of the following industrial/decorative applications do you produce?**



Interestingly, only 20% of the sample of 25 printers, reported that Functional print accounted for more than 50% of turnover. So, it would appear that the sample is made up of printers

that have diversified into Functional print from another market sector. This makes sense given the recruitment of the panel from attendees at past drupa shows.

### Functional print technologies over time

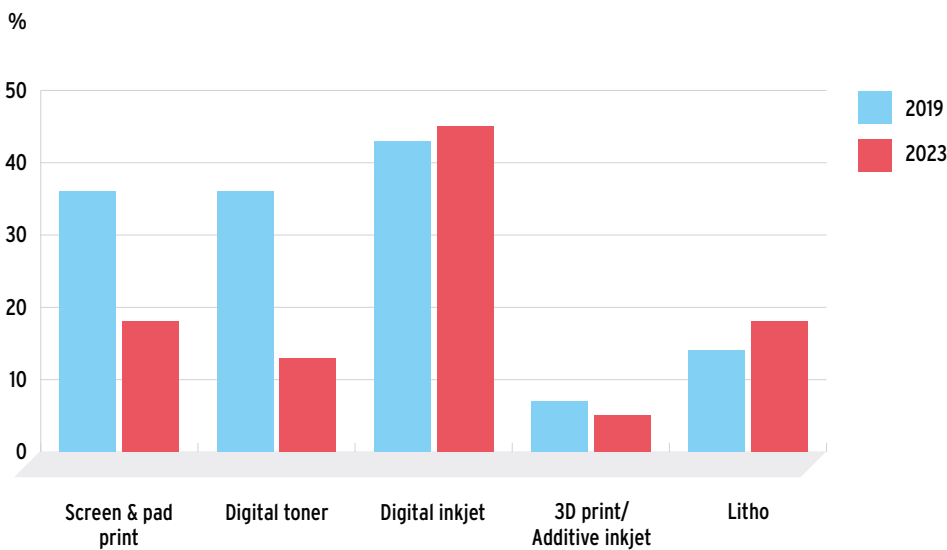


Chart 30 What print processes do you primarily use?

It would appear that there is a substantial shift away from Screen and pad and Digital toner technologies, although care must be taken given the small sample.

*“We must grab a larger market share due to advanced offerings as well as by entering new Print on Demand markets.”* **Functional printer, South Africa**

## Conclusion

Levels of economic confidence are substantially better this year than last and much better than before Covid in all regions (except N. America (small sample)) and all market sectors. Will this optimism stand up to the buffeting of wider economic pressures, as spelt out in the earlier economic commentary only time will tell. However, there are some key findings from the 9th drupa Trends survey:

- Economic confidence in printers' own companies was almost universally higher in 2023 by region and market sector and expectations for 2024 are even better. Suppliers were somewhat less upbeat for 2023 but shared the enthusiasm for 2024. It was particularly pleasing to see the surge in confidence from Commercial and Publishing printers.
- Printer revenues and prices were substantially better for the second year running and against a downbeat long-term trend. As a result, the squeeze on margins was noticeably reduced.
- Digital turnover as a proportion of total turnover has not risen significantly since 2014, nor has the proportion of printers operating web-to-print installations. Further, the proportion of turnover drawn from web-to-print for those with such installations is stubbornly static.
- Capital expenditure fell back during Covid of course, but everyone is expecting a strong boost in 2024. That may not be a surprise for Packaging and Functional markets, but does mark a clear shift to a more upbeat view of the future from Commercial and Publishing printers. Print technology is the favourite target for most market sectors, followed by finishing equipment.
- Specific print technology plans vary substantially between markets, but overall Sheetfed Offset remains the most common choice, Flexo remains very popular, and Toner cutsheet colour is the most popular digital option, followed by Inkjet wide format and then Inkjet cutsheet colour.

- Finally, it is clear that the old saying, "Evolve or Die" still applies. Printers and Suppliers alike must continue to seek new opportunities - products, services, markets; diversification is the key.

Some of the best takeaways from the survey are the quotes from the printers and suppliers themselves:

*"By leveraging our strengths, embracing innovation, and prioritizing customer satisfaction, we aim to overcome challenges and seize the opportunities that lie ahead, both domestically and internationally."* **Packaging printer, Lebanon**

Finally, it was clear from the comments made how keen everyone is to get to drupa 2024:

*"Yes. I have missed the previous drupa 2020 very badly due to Covid. I think that's the case with most printing professionals. drupa is a one stop shop for updating printing companies on latest technology in equipment and process systems. As such it is an inevitable part of our professional calendar."* **Commercial printer, United Arab Emirates**

*"Of course, we are longing to visit drupa 2024, to meet manufacturers, dealers, representatives of various printing and allied machinery products manufacturers throughout the world at one place. drupa is the hallmark of printing related exhibitions and so many visitors get great benefit by participating."* **Commercial. Publishing and Packaging supplier, India**

# Appendix

**Table 1 drupa expert panel participants by region**

Region	Printers	Suppliers <sup>1</sup>
Europe <sup>2</sup>	161	75
N America	28	16
S/C America	66	24
Africa	35	12
Asia	87	29
Middle East	21	3
Australia/Oceania	24	5
Global total	449	170 <sup>3</sup>
1. Participants reporting for a region may or may not be based in that region 2. Trends report excludes Russia 3. Total is less than the sum of regions as some suppliers reported for multiple regions		

**Table 2 drupa expert panel printers by market sector**

	Commercial	Publishing	Packaging	Functional <sup>1</sup>
Europe	101	35	64	9
Rest of World	92	31	96	15
Total	154	61	122	
1. Printers for whom functional printing is a significant part of their turnover 2. Not all participants stated their region	193	66	164 <sup>2</sup>	25 <sup>2</sup>

### Printer site turnover by region

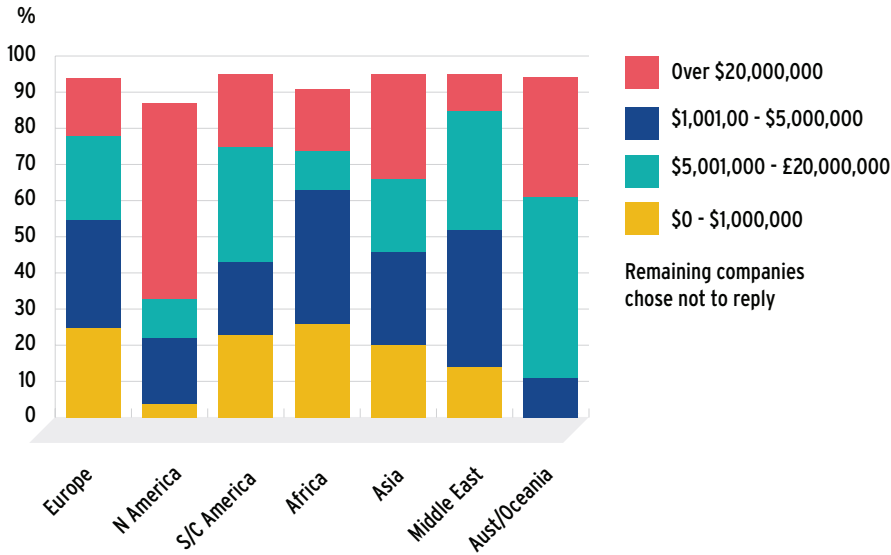


Chart 31 What was the annual turnover at your site in 2022?

### Printer site turnover by Global and by market

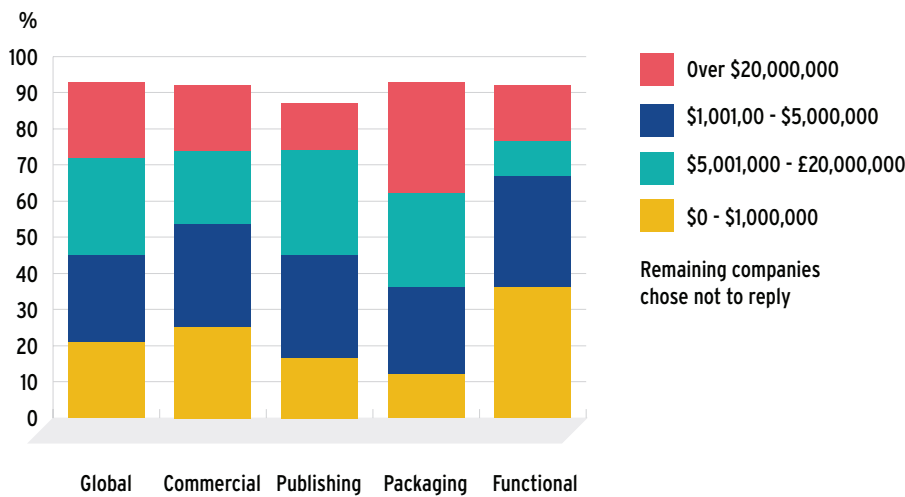


Chart 32 What was the annual turnover at your site in 2022?

**Table 3 Printer % Volume change by print process in total and by market 2023**

(Excludes separate data sets of &lt;20 printers but that data included in total figures)

	Total	Commercial	Publishing	Packaging	Functional
Sheetfed offset	6	2	15	9	-4
Heatset offset	0				
Coldset offset	0				
Gravure	1			1	
Flexo	6			15	
Screen printing	1			1	
Letterpress	-1	-2			
Digital toner rollfed mono	-1				
Digital toner rollfed colour	3				
Digital toner cutsheet mono	3	3	15		
Digital toner cutsheet colour	18	31	23	4	
Digital inkjet rollfed mono	1				
Digital inkjet rollfed colour	5	6			
Digital inkjet cutsheet mono	3				
Digital inkjet cutsheet colour	8	11			
Digital inkjet wide format - cut-sheet and rollfed	10	15			
Thermal	2				
Hybrid offset/ flexo/ digital	2				

**How would you assess your printing volume in the following technologies over the last 12 months?**

**Table 4 Printer investment plans for print technology 2023 - global and by market**

<b>% Planning investment</b>	<b>Total</b>	<b>Commercial</b>	<b>Publishing</b>	<b>Packaging</b>	<b>Functional</b>
Sheetfed offset	29	24	32	35	13
Heatset offset	4	2	8	3	13
Coldset offset	3	2	8	2	0
Gravure	4	1	0	10	0
Flexo	17	6	4	35	7
Screen printing	5	3	0	5	20
Letterpress	1	2	4	0	0
Digital toner rollfed mono	0	1	0	0	0
Digital toner rollfed colour	5	7	8	2	0
Digital toner cutsheet mono	3	4	12	0	0
Digital toner cutsheet colour	20	31	32	7	13
Digital inkjet rollfed mono	3	6	0	2	0
Digital inkjet rollfed colour	12	18	4	9	7
Digital inkjet cutsheet mono	3	1	4	5	7
Digital inkjet cutsheet colour	17	24	16	10	7
Digital inkjet wide format - cut-sheet and rollfed	19	33	12	4	27
Thermal	3	3	4	3	7
Hybrid offset/ flexo/ digital	12	7	4	21	13

**In which of the following printing technologies do you plan to invest in the next 12 months?**

# Glossary

Commercial printer	General printing, Direct Mail, Business forms, Security, Wide-format (rigid and flexible media), Photoproducts, Transactional, Trade finishing for commercial work.
Publishing printer	Newspapers, Magazines, Catalogues and Books (Conventional, Short-run and On-demand), Trade finishing for publications.
Packaging printer	Labels, Cartons & Carton board, Flexible packaging, Corrugated/Secondary, Rigid, Point of Sale/Point of Purchase/Banners.
Functional printer	Industrial/Decorative work - Textiles, Wall coverings, Other decorative printing, Ceramics, Printed electronics, 3D.
Digital toner cutsheet mono	Single colour Electrophotography/Toner machines with sheetfed paper supply. Includes both dry and liquid toner types.
Digital toner cutsheet colour	Multiple colour Electrophotography/Toner machines with sheetfed paper supply. Includes both dry and liquid toner types - dry is limited to SRA3 and long A3 formats, liquid can be made up to B2 and even B2 formats.
Digital toner rollfed mono	Single colour Electrophotography/Toner machines with rollfed paper supply. Includes both dry and liquid toner types.
Digital toner rollfed colour	Multiple colour Electrophotography/Toner machines with rollfed paper supply. Includes both dry and liquid toner types. Most dry toner types are limited to about 330mm wide, but Xeikon (dry) and HP Indigo (liquid) can handle 500+ mm.
Digital inkjet rollfed mono	Mono and colour single-pass inkjet machines with rollfed paper supply. Usually high speed, high volume and Inks are usually aqueous and sub-strates are usually paper.
Digital inkjet rollfed colour	Multiple colour single-pass inkjet machines with rollfed paper supply. Usually high-speed, high-volume Inks are usually aqueous and substrates are usually paper.
Digital inkjet cutsheet mono	Single colour single-pass inkjet machine with sheetfed paper supply. Inks are usually aqueous and substrates are usually paper.
Digital inkjet cutsheet colour	Multiple colour inkjet machines with sheetfed paper supply. most production-class inkjet "presses" are B2 format, distinguishing them from cut-sheet dry toner machines that are usually limited to SRA3 and long A3.
Digital inkjet wide format - Cutsheet and rollfed	Wide format multiple colour inkjet machines either cutsheet (including papers or rigid media) or rollfed. Normally uses multiple pass printheads to build up image more slowly but with higher quality potential than fast single-pass types. Inks may be aqueous, solvent/ecosolvent, latex, UV-cure (or UV-hybrids of two types), plus dye sublimation and specialist textile fluids. The various inks all work with different ranges of media, but include papers, vinyls and other plastics, synthetics, natural and synthetic fibre textiles. Rigid media used with UV inks can include card, corrugated, metals, plastics, wood, glass, etc.

Thermal	Digital print using coated thermochromic paper or a thermal transfer rib-bon. Often used for coding and marking.
Hybrid offset/flexo/digital	Multiple print processes included in the same machine.
SKU	Stock Keeping Unit (an individual item/product with a unique reference identifier).
VDP (Variable Data Printing)	A form of digital printing in which elements of text and graphics can be changed from one sheet to another.
Web-to-Print	E-commerce system for the ordering and submission of print jobs online.
ESG	<i>Environmental:</i> energy and water consumption, waste output and management, pollution mitigation, material usage and compliance with environmental laws <i>Social:</i> Within workplace - diversity, equality, labour standards, supply chain management Customers and broader community - product safety, customer privacy, community engagement <i>Governance:</i> Transparency, Connectivity with stakeholders, Equality, Fairness and Efficiency