

6th drupa Global Trends Report 2019 Executive Summary

Welcome to the executive summary of our 6th drupa Global Trends Report, tracking key economic and market developments across the globe. The survey conducted in October 2018 had nearly eight hundred and fifty participants with a good cross section from most regions and markets. Our thanks to the drupa expert panel made up of printers and exhibitors from the 2016 show.

We circulate two separate surveys, one each for printers and suppliers, sharing some questions but also asking specific questions relevant to each group. 620 printers participated and whilst a small majority were from Europe (358), the rest of the world was well represented. Clearly there are fewer suppliers, but we were pleased to have 209 such participants, of which 120 reported on Europe but the remaining regions were well covered.

Recently we issued the panel with a shorter specific survey on Systems Integration, a challenge for all printers whatever their size or market, that will create our second Spotlight report to be published in early summer.

Global print is in good shape overall. Most of our global indicators have climbed over the last five years and whilst there are some leading indicators of challenges ahead, they are commonly with regard to non-print issues, namely politics and the broader economic conditions. Clearly there are some regions doing better than others. Equally there are stronger and weaker markets. Yet the industry in general shows confidence despite the global recession and the impact of digital media.

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 would be pleased to receive any feedback, so send us an email to drupa-expert-panel@drupa.de.

The drupa team
April 2019

drupa Global Trends April 2019

6th drupa Global Trends Report 2019 - Executive Summary

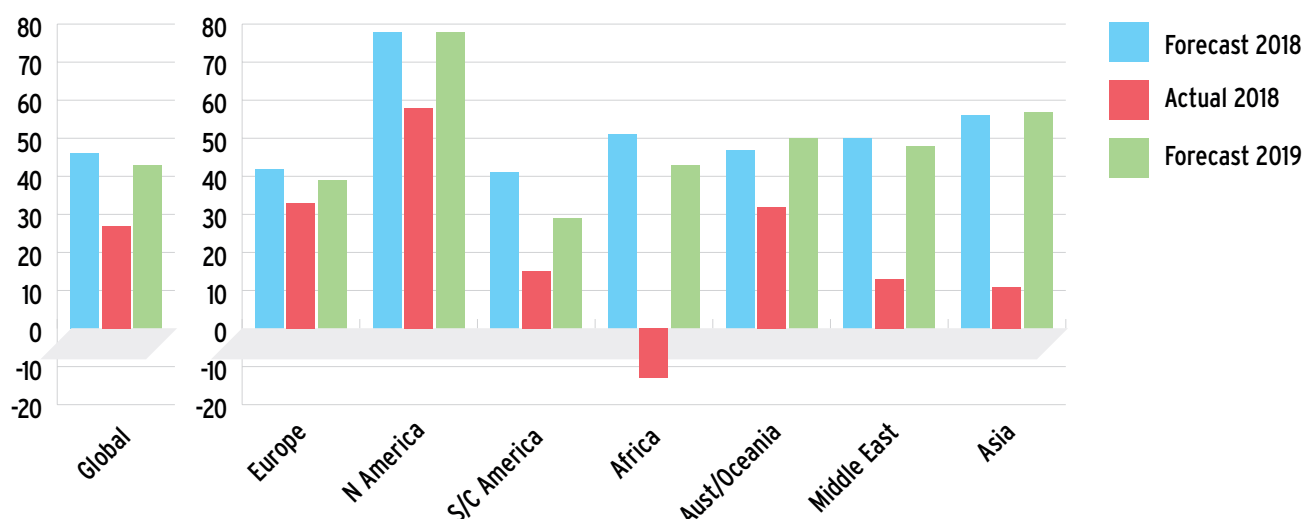
Economic performance

Print globally is doing well. There are regions and markets that struggle but the overall condition is good. The drupa Printer Barometer of economic confidence shows a positive net balance of +27% Actual in 2018. To explain; 40% of printers described their company as in

a 'good' condition and 13% described it as 'poor'. The balance answered 'satisfactory'. The net positive balance +27% is the overall result given and it is this net positive or negative balance that is shown in many of the charts to follow¹.

drupa Printer Barometer of economic confidence 2019

% net balance positive v negative



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

Regionally the results are uneven; North America is forging ahead, Europe and Australia/Oceania are doing well, Asia, South/Central America and the Middle East are cautious, while Africa is struggling. We track trends over time and can see in Infographic 1 that broadly speaking the

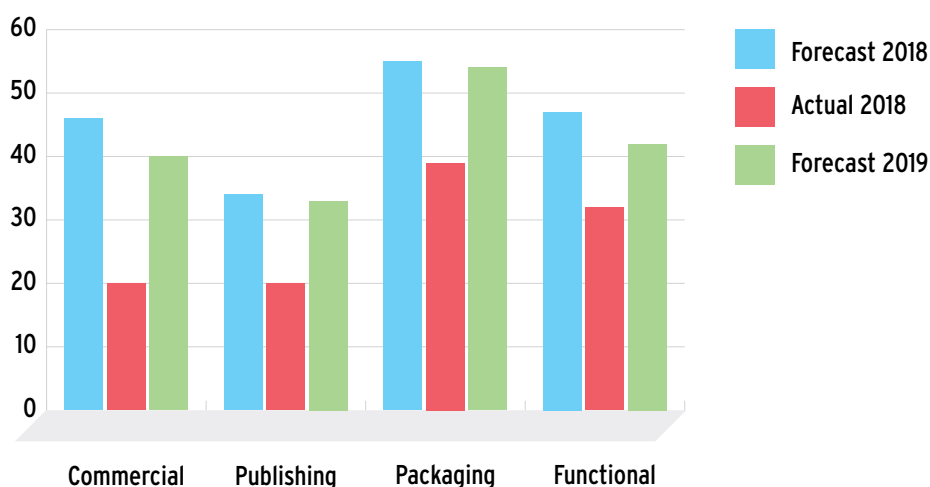
pattern follows the same regional characteristics with North America powering away, Europe strengthening and Africa declining steadily.

¹. Numbers of printer and supplier participants by market sector and region are given in the full report Appendix.

Packaging and Functional are clearly the strongest market sectors but there is a dip in confidence amongst Commercial printers after several years of strengthening results (net balance of +20% compared with +31% last year).

drupa Printer Barometer of economic confidence 2019 globally by market

% net balance positive v negative



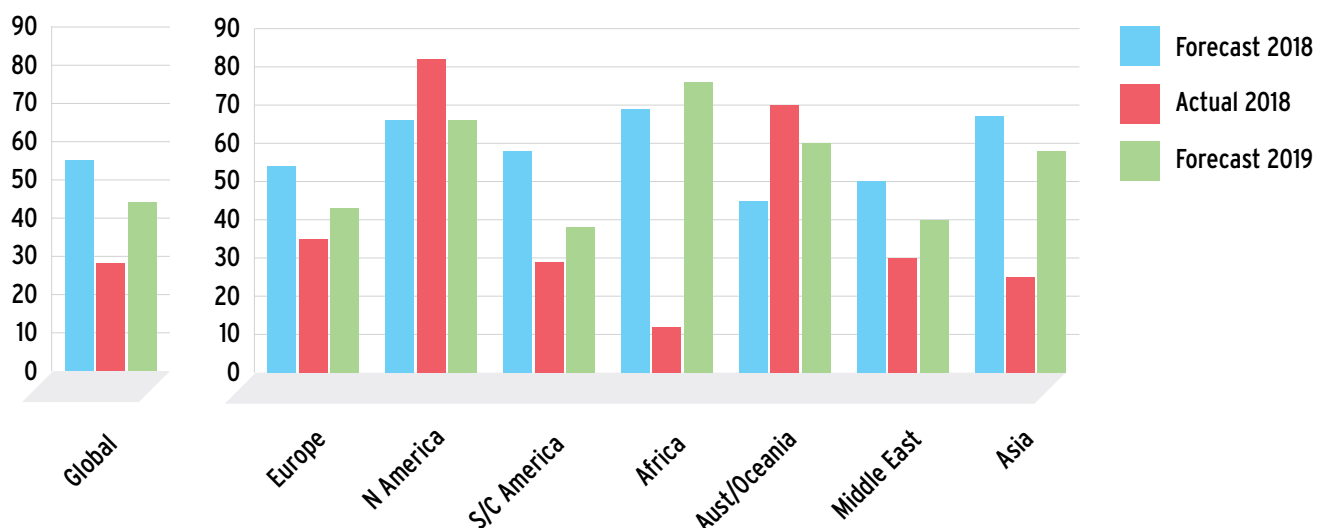
How do you rate the current economic situation of your company? What are your expectations of your company's economic situation for the next 12 months?

Suppliers have shown increasing confidence every year since we first included them in the study, from +18% in 2014 to a remarkable +53% in 2017. It was too good to last and this year the net balance dropped back to +28%. What is more, the forecasts for next year were almost all

more cautious than last year, albeit still positive in all cases. Again regional variances were huge, with North America enjoying huge confidence and Africa struggling.

drupa Supplier Barometer of economic confidence 2019

% net balance positive v negative



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

Suppliers share the printers' confidence in Packaging and Functional markets but are more cautious about prospects next year in the other markets - see Infographic 1.

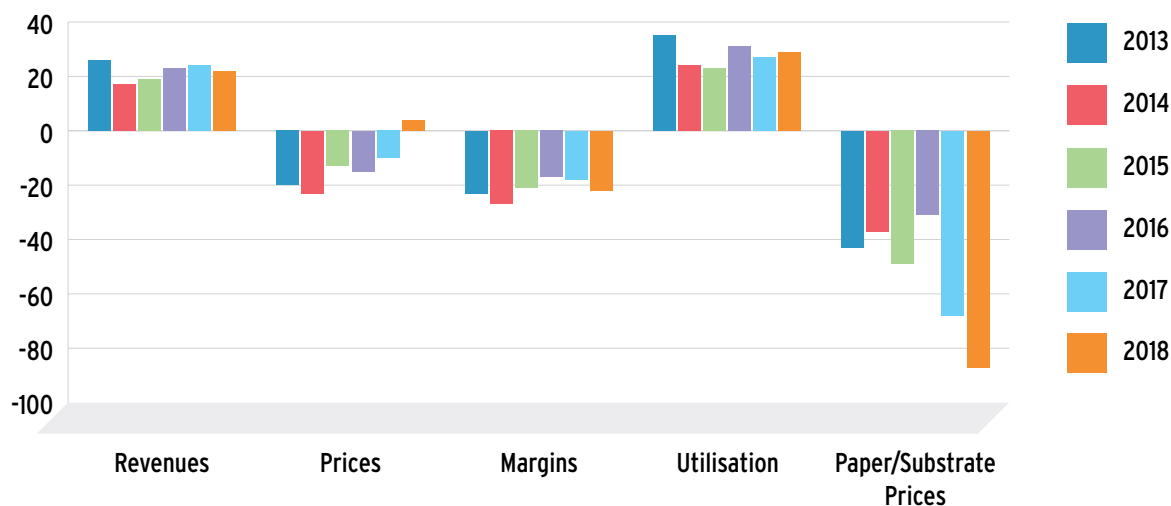
Printers globally face squeezed margins as costs rise faster than prices. In simple terms the solution has been to increase revenues by

increasing utilisation while holding down costs as much as possible. Whilst this broad pattern still holds, this year we can report a modest +4% net balance improvement in prices and that despite severe increases in paper/substrate prices².

2. We report on substrate prices from the perspective of printers.

Printer financial performance over time

% net balance positive v negative



How have your company's revenues, prices, margins, utilisation and paper/substrate prices changed over the last 12 months?

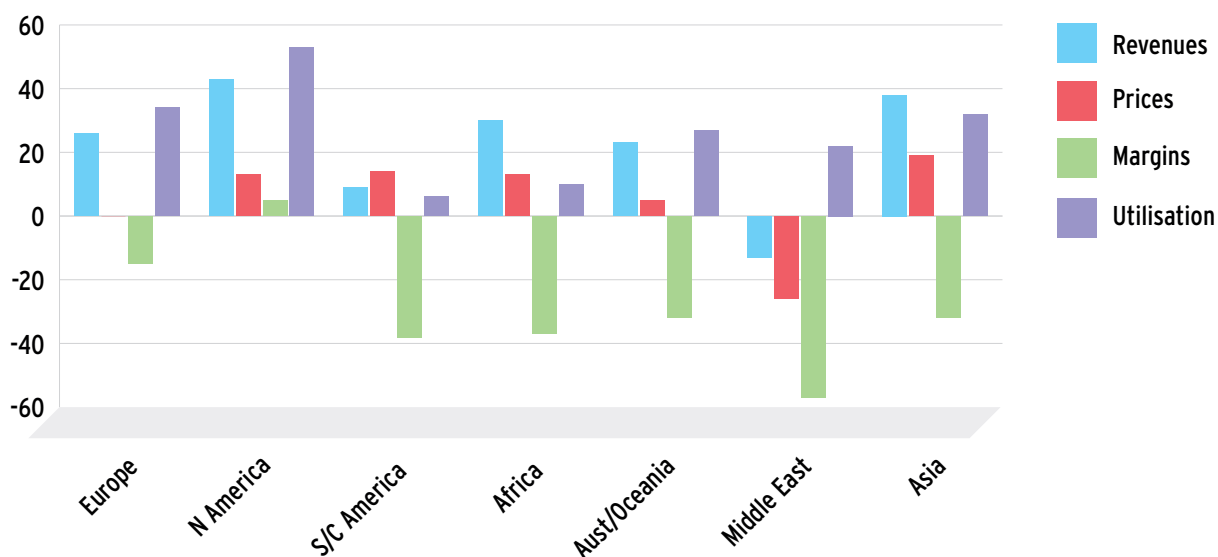
Regionally and by market sectors the picture varies substantially. North America reported positive net balances on all variables (except

substrate prices), whilst the Middle East reported worsening figures for all except utilisation.³

3. Column gaps in any chart indicate a nil result.

Printer financial measures by region 2018

% net balance positive v negative

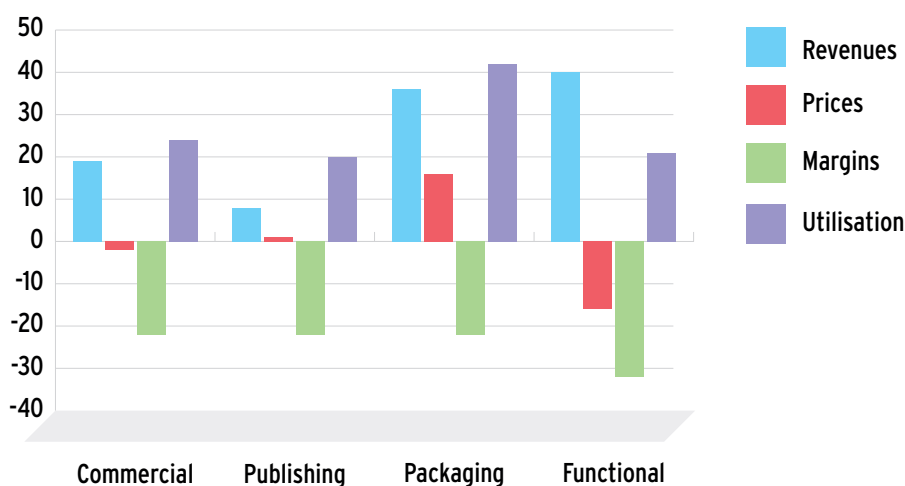


How have your company's revenues, prices, margins and utilisation changed over the last 12 months?

Looking at individual market sectors, as expected Packaging looks positive in most respects but Functional shows negative net balances for both prices and margins, which is surprising for an expanding market.

Printer global financial measures by market

% net balance positive v negative



How have your company's revenues, prices, margins and utilisation changed over the last 12 months?

Suppliers were able to report a global net positive balance on prices for the first time but were still under pressure on margins. Looking at regional performance perhaps the most striking result comes from North America where the suppliers appear to have failed to turn benign market conditions into revenue

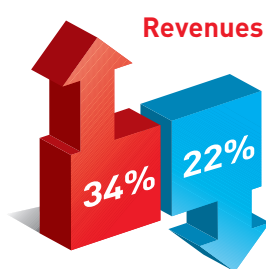
and price improvements. Also of note is the clear reduction from their peak in 2017 of core equipment/material sales (down from +29% to +11%) and upgrades (down from +18% to +12%), although consumables and servicing/spares held up well.

Key financial measures for printers

Reported rise
Reported fall



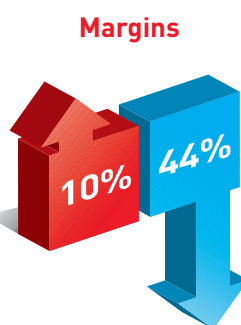
Revenues



Prices



Margins



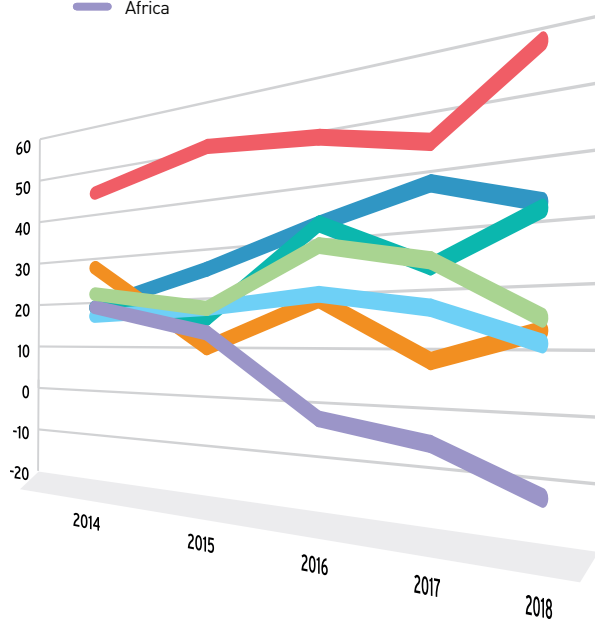
Key financial measures for suppliers

Reported rise
Reported fall

Printer regional economic confidence over time

% net balance positive v negative

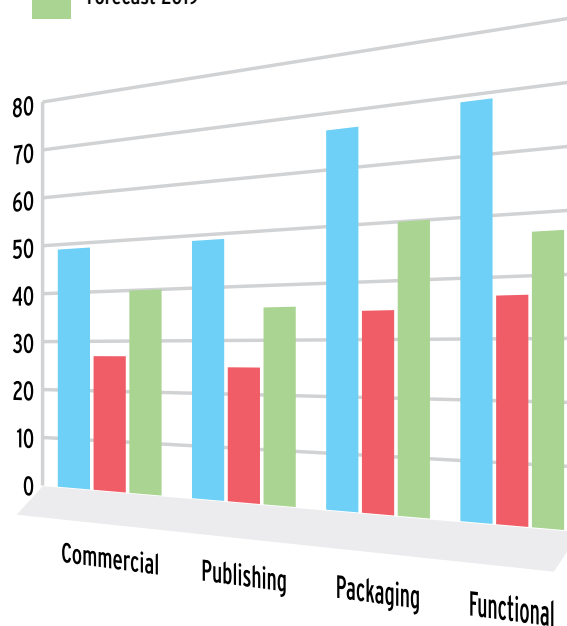
Europe Aust/Oceania
N America Middle East
S/C America Asia
Africa



Suppliers confidence in market sectors

% net balance positive v negative

Forecast 2018
Actual 2018
Forecast 2019



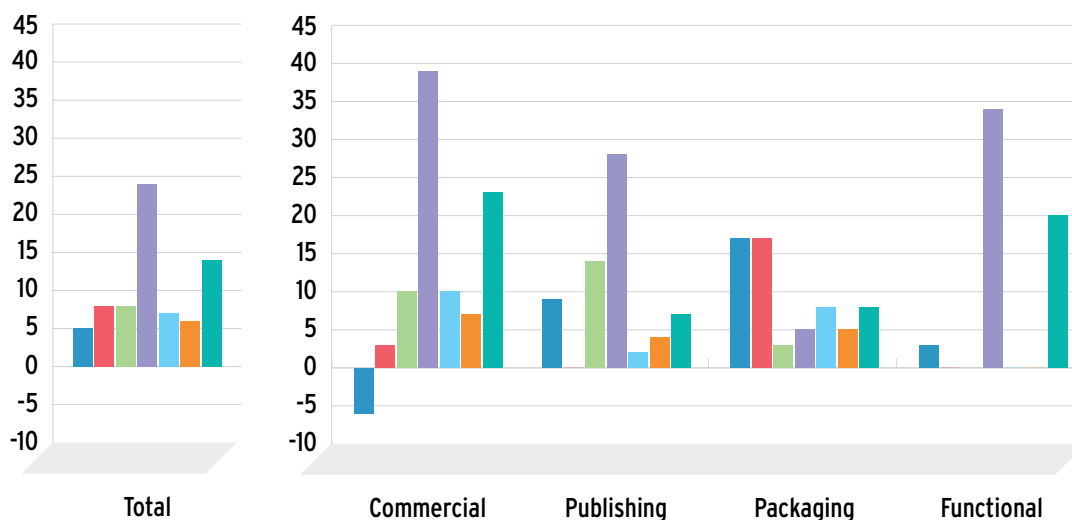
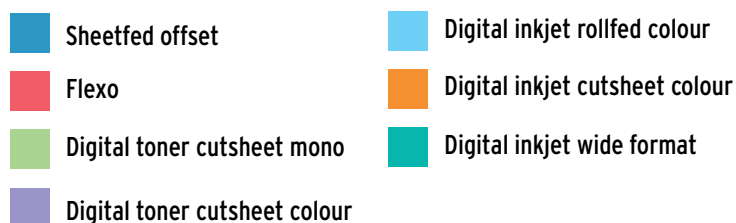
Operational performance

One must drill down into individual market sectors to track changes in the operational mix of print processes. Take Sheet-fed offset for instance, still the most common print technology and present in 66% of all companies participating. In Packaging the volumes grow year-on-year but in Commercial

a decisive fall in volume was reported for the first time. Digital toner cutsheet colour is the next most common technology (48% of printers have it) but with the exception of Functional print, there is a declining rate of growth year-on-year.

Major print volume changes by print process by market

% net balance positive v negative



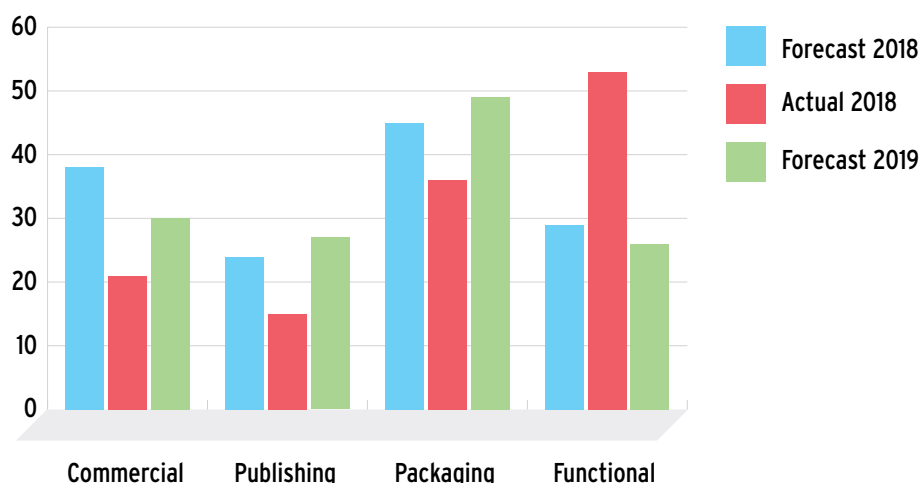
How would you assess your printing volume has changed over the last 12 months?

For conventional print, run lengths and lead times decline steadily whilst the number of jobs continues to climb. For digital print, run lengths climb, lead times decline and the number of jobs rises inexorably. Yet the proportion of turnover that is digitally printed changes only very slowly – 23% of printers reported digital print represented more than 25% of turnover in 2013 rising to just 29% in 2018. And just 20% of printers stated that of their digital print turnover, more than 25% used variable data, just 1% higher than in 2014.

25% of global participants had a Web to Print installation in 2014 and it is the same figure in 2018. However the proportion of turnover taken via a W2P installation is climbing. In 2014 17% of participants with W2P installations reported more than 25% of turnover came from that source. In 2018 that proportion of participants had increased to 23% (Packaging up from 5% to 19% and Publishing up from 13% to 28% over the same period).

Printer Capital Expenditure trends by market 2019

% net balance positive v negative



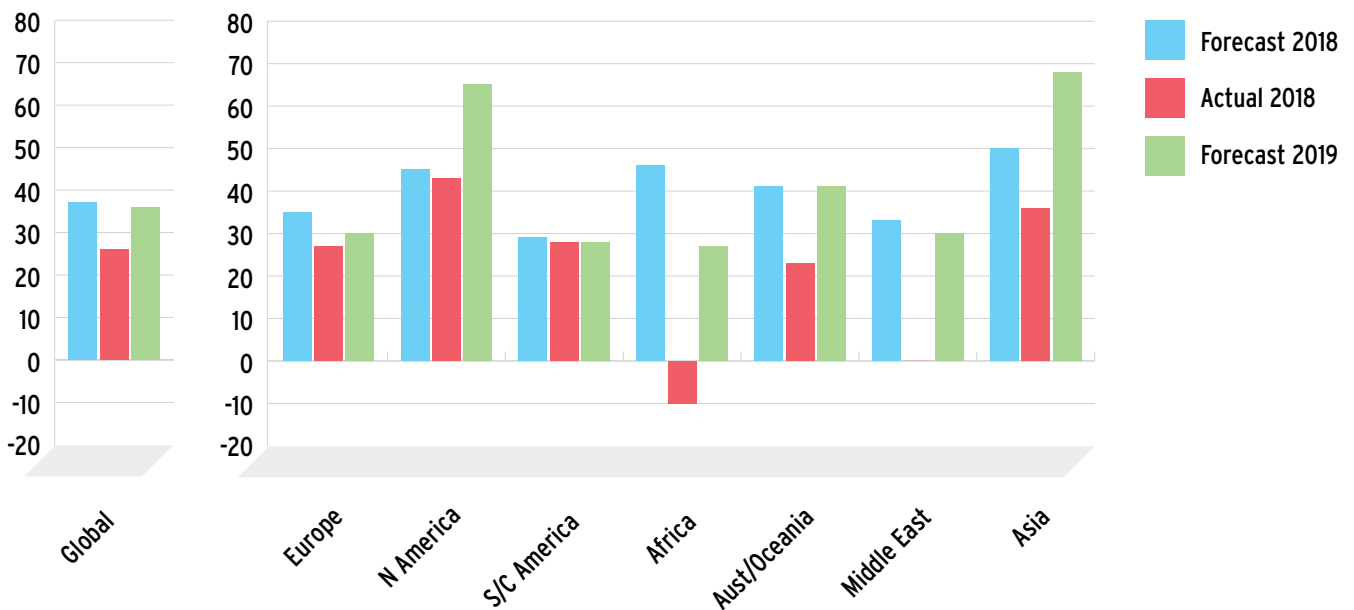
How has capital investment changed over the last 12 months? And over the next 12 months?

The drupa expert panel understand that they must continue to invest wisely, if they are to ensure their companies continue to thrive. So despite the overall challenging conditions, all markets and all but one region saw printers invest more in 2018 than 2017, albeit less than last year's optimism suggested. Not surprisingly, Packaging and Functional printers were the most positive with Commercial and Publishing printers some way behind. Regionally expenditure

patterns largely followed the overall performance of the regions. Hence North America was the most positive followed by Asia and Europe. The Middle East was understandably cautious with as many stating they had reduced as increased expenditure, whilst Africa reported a negative net balance in Cap. Ex.

Printer Capital Expenditure by region 2019

% net balance positive v negative



How has capital investment changed over the last 12 months? And over the next 12 months?

Finishing equipment was the top priority, followed by Print technology, followed by PrePress/Workflow/MIS. Packaging and Functional printers reversed the top two priorities. As for Print technology targets, this very much depends on the markets you serve – see Infographic 2. Overall Sheetfed offset still is the most common, but the digital technologies are close behind with Digital toner cutsheet colour the next most popular. However major differences show at market level. Flexo and Sheetfed offset lead for Packaging, while Digital toner cutsheet colour and Sheetfed offset are neck and neck in Publishing. For Commercial and Functional markets, it is Digital toner cutsheet colour followed by Digital inkjet wide format.

Suppliers too continue to invest steadily. Functional and Packaging markets are receiving the most investment, with significantly less positive figures for Publishing and Commercial. Regionally there are significantly reduced levels in South/Central America and the Middle East but very positive levels in Australia/Oceania. Building new sales channels remains the main target for Cap. Ex., while collaboration by means of strategic partnerships is common (44% entering new

partnerships in the last year). Marketing budgets are still climbing but at a slower rate than in previous years. Product training and online content are the fastest growing expenditures, while Trade Shows are the most common marketing tool (96% of suppliers).

We asked what are the key constraints on growth? For most (printers and suppliers) it is 'Strong competition' followed by 'Lack of demand' with 'Lack of skills' third. However skills shortages are becoming more important and it was the No. 1 issue in North America and the No. 2 in Asia. Given that market conditions are largely outside their control, what can printers and suppliers do to improve matters? 'Reduced staffing/improved productivity' followed by 'Systems integration' are the most common responses for printers. For suppliers it is 'New product launches' followed by 'New sales channels'. In response to a question about long-term technological disruption, both suppliers and printers chose 'Automation and data exchange' (often described as 'Industry 4.0') as having most impact. When asked about long-term threats to the industry, printers chose 'Digital Media' and suppliers 'Overcapacity'.

Market sector trends

What it means to be in 'Commercial' print varies a great deal across the world, in response to local market conditions. So in North America it is as common to be in Direct Mail as 'General commercial' and almost as common to be in Wide format markets. Yet in Africa not one participant did Direct Mail and in South/Central America it was more common to do Business Forms than 'General commercial'. Then again the number and range of added value services also varies greatly by region. Once again North America leads with 6.3 services on average, Europe has 4.1 and Africa 2.8. Again local market conditions clearly matter.

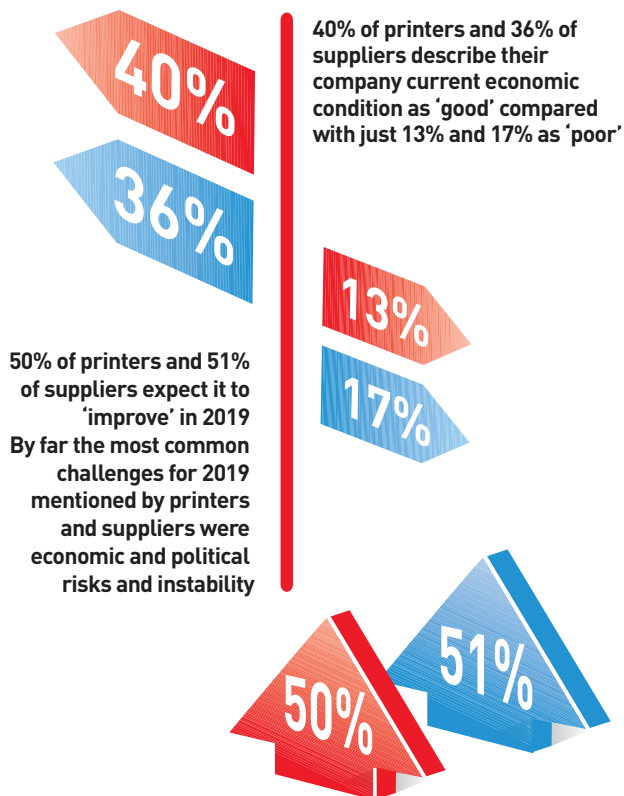
Publishing printers fall into three broad groups - book printers, magazine/catalogue printers and newspaper printers. Each group has typically widened the range of products it offers as core demand has lessened. The success of digital book production has attracted in fresh competition from Commercial printers. Not surprisingly across all these markets there is a significant increase in the impact of digital media, which has led to more digital on-demand printing and versioning.

The impact of digital print is much debated amongst Packaging printers. There is steady growth in the number of converters actively selling digital print, led regionally by Europe. Demand for digital print is growing, with the number of SKUs specifying digital print up this year by c.5% across all packaging types except Labels (already at 40%). However SKU's with other added value features are still in a small minority with modest increases only over the last five years. Environmental issues have

slipped down the agenda in recent years, but recent political/media attention to the damaging environmental impact of plastics has made headlines this year. You will view this as a good or bad development depending on whether you convert plastic or paper-based packaging, but certainly it is one to watch in later reports.

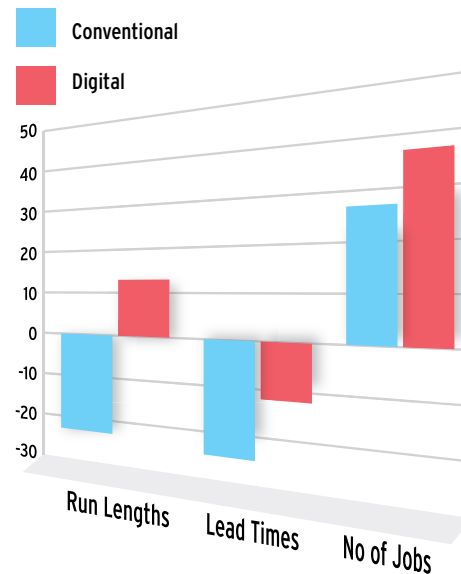
A major proportion of Functional print participants when asked which applications/markets they serve, answer 'other', despite a good range of core options. This year we asked them to specify the 'other' and it demonstrated the extraordinary range of products where print is used as part of the production process. From wooden plaques to parts for automobiles, the sheer variety defies categorization. Most of the Functional print panel members have grown into that market from other sectors and it is striking to see how quickly most have grown their functional work as a proportion of total turnover.

How are companies doing?



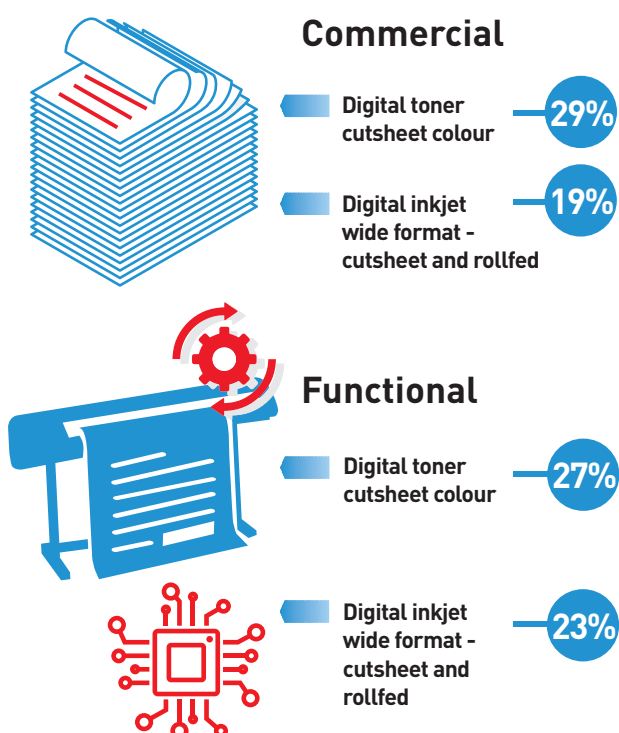
Change in work mix 2018

% net balance positive v negative



Proportion of digital print grows slowly - 23% reported that digital print was more than 25% of turnover in 2013 up to 29% in 2018

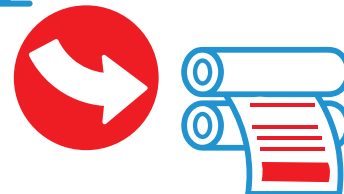
Top two print technology investment plans by market 2019



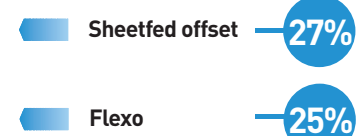
Web to print 2018



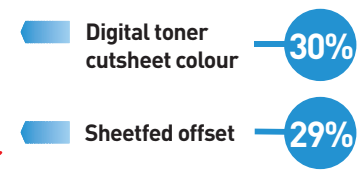
Installation rate stalled. - 25% in 2014 and 25% in 2018. % of turnover via W2P grows - 17% reported more than 25% of turnover by W2P in 2014 up to 23% in 2018



Packaging



Publishing



Conclusion

Global print is in good shape overall. Almost all of the global indicators have climbed over the last five years and whilst there are some leading indicators of challenges ahead, in most cases they are related to non-print issues, namely politics and the broader economic conditions, either regionally e.g. Brexit in Europe or wider global issues e.g. trade wars. Clearly there are some regions doing well - North America and Europe, and others struggling - Africa, South/Central America, the Middle East. Equally there are strong markets - Packaging and Functional and weaker ones - Commercial and Publishing. Yet the industry has found its collective confidence again after the twin shocks of the last decade - the global recession and the impact of digital media.

This year for the first time we asked participants to answer open-ended questions on the opportunities they perceive and the threats they face. By far the most common worries for 2019 listed by printers and suppliers were economy or political challenges:

'The economic situation of the country.'
Packaging printer, Argentina

'US trade wars, and uncertainty in UK over Brexit.' Publishing printer, Malaysia

For many it would seem time to diversify, whilst others will stick to their core markets but ensure they become more efficient and stay close to their customers:

'We need to be in the packaging industry but we are a publication printer. Therefore the challenge is to capture the collaterals for FMCG companies.' Publishing, Philippines

'We aim for improved productivity and increased automation to achieve better margins at the same price and increase customer portfolio, personalization and differentiation with little increase in costs.' Packaging, Spain

'We believe that companies like ours offer a solid and reliable alternative for niches of specific products. We firmly believe that our experience and proximity to our customers make us more of a trusted communicator, who as a partner can offer them and ourselves a good future.' Supplier, Commercial and Packaging markets, South/Central America