

2018 Digital Wide Format Graphics Print Forecast & Analysis

Incorporating 2017 CY data

21 April 2018



2017: Healthy Demand, Tough Competition

The wide format graphics digital print market as a whole globally still satisfies a persisting and growing demand for color graphics supporting retailing, merchandizing, event marketing and specialist decorative markets. Digital shows great and continuing strength as a means of diversifying businesses' communication to customers. If you are a systems vendor to these markets you will however see no diminution of competitive pressure from fellow vendors, and increasingly from aftermarket ink suppliers.

Vendor revenues for hardware and ink have reached \$4.4B and have grown year-on-year just under 2% by our conservative estimate which, given competitive pressures in this highly efficient market, is not a bad performance. However, an increasing share of the number is going to non-OEM ink suppliers. The market still eats up over 77,000 systems in a year – and we are certainly undercounting up to perhaps 10% small and local non-mainstream suppliers. That number is to a large extent now

replacing a part of the 270,000 installed of systems worldwide, and with fewer more efficient systems at lower unit cost to cover the existing and new demand for output.

Inside the overall market in terms of technology sectors the most action in terms of growth and innovation is coming now from the UV sector, which addresses the market's needs for above-average growth in production volumes. There is growth at the high end in flatbed systems within this sector, but above all there is growth in Lowend Roll-To-Roll systems where the economic and price gap between Lowend Flatbed Systems and Highend Ecosolvent/Latex systems is being progressively filled. That is even including plotter cutters in the UV sector now.

Note in the following statistical comparisons to 2016 CY we are comparing to numbers adjusted throughout 2017 after the issuance of the 2016 analysis. In other words the 2016 numbers we are now using for comparison to 2017 are moderately different in some cases to those published in the last forecast.

Topline Numbers Analysis & Projections

		hw/cons. Share	16-17 change
Vendor Revenues hw & ink ww WFG 2016	\$4,446,562,894		1.70%
Vendor Hardware Revenues 2016	\$1,674,120,482	38%	3.72%
Vendor Ink revenues 2016	\$2,772,442,412	62%	0.52%
Vendor Systems Units of Sale All Sectors	77,204		-6.43%
M2 Printed ww Digital WFG 2016	1,400,282,846		8.82%
Vendor Revenue cagr to 2021	0.85%		
M2 Printed cagr to 2021	8.97%		

Note: No Chinese demand or vendor numbers are included

The statistics above show the overall size of the wide format inkjet market (excluding soft signage - see below for separate soft signage statistics) worldwide with some projections to 2022 (see appendix for the full statistical forecast). The revenue data is measured at the level of pricing from vendors or dealers to users according to the different channels used. Although it is nothing really new to say, retail graphics, followed by event-related specialty graphics is finding ever newer creative outlet thanks to the beneficial and enormous diversity of the highly-fragmented print provider base of 150,00-200,000 sites worldwide. This has allowed of a truly localized offering everywhere. Furthermore there is now a clear linkage between color graphics print and a wider deployment of digital communications in other modes. Full marketing campaigns based on a backbone of live social media-fed data are allowing advertising, retail graphics, events, packaging, labeling and print/digital communications function to be increasingly integrated. That in itself boosts growth. Furthermore this development is in its early not-very-efficient days, with the prospect that maturation of the process of integration will be a further spur to growth.

	2017	2022	cagr
All Aqueous (no China Numbers included)			
Units Sold	39,682	37,737	-1.00%
Ink & Hardware Revenue	\$1,050,490,561	\$877,000,464	-3.55%
All EcoSolvent & Latex (no China Numbers included)			
Units Sold	33,354	35,515	1.26%
Ink & Hardware Revenue	\$2,050,970,688	\$2,093,556,824	0.41%
All UV (no China Numbers included)			
Units Sold	4,168	4,789	2.82%
Ink & Hardware Revenue	\$1,336,928,409	\$1,661,637,851	4.44%
Grand Total All Sectors (no China Numbers included)			
Units Sold	77,204	78,042	0.22%
Ink & Hardware Revenue	\$4,438,389,657	\$4,632,195,139	0.86%

The chart above shows projections from 2017 (actual data) through 2022 and also provides a snapshot of the YOY 16-17 development of the statistics presented. The difference between the projected 5-year growth rate and the YOY number shows what we mean by above-average YOY growth rates. Remember that the WFG market cannot be measured accurately just from year-to-year. Acquisition cycles and technology adoption rates are longer than a year, resulting in a growth rate that averages out over time – over something more like 3-5 years.



The statistics immediately above refer to units of systems sold and to ink & hardware revenues. Underlying these statistics are output statistics around square meters printed in total (in turn driving ink sales for vendors). Output statistics are a truer measure of final market demand and the numbers show this in the following chart.

	2017	2022	cagr
All Aqueous (no China Numbers included)			
M2 Printed	160,016,417	142,893,301	-2.24%
All EcoSolvent & Latex (no China Numbers included)			
M2 Printed	833,181,604	1,327,199,616	9.76%
All UV (no China Numbers included)			
M2 Printed	391,130,950	666,060,503	11.23%
Grand Total All Sectors (no China Numbers included)			
M2 Printed	1,384,328,972	2,136,153,419	9.06%

The chart which follows provides an updated graphic representation of the relative sizes of each Wide Format sector in terms on the left of vendor revenues for hardware and ink and, on the right, square meters printed.



Sectoral Commentaries

Aqueous Graphics Markets (no CAD)

2017 in aqueous markets gave us more of what we saw in 2016, which is to say slow but clear decline in year-on-year sales, even though at a total of around 40,000 sales in this ink-lucrative and largely print quality-driven market this is by most measures still healthy.

The relatively high sales numbers to some extent reflect the relatively low cost of aqueous systems, and therefore the relatively low cost of replacing older systems. Added to that is the fact that aqueous systems are rooted in core functions like proofing and photo-quality output needs which only aqueous is perceived to be able to fulfill.

There have been some product re-classifications between the professional (print for pay) and corporate (print for use) parts of the aqueous market some of which are vendor-driven, and some of which we have undertaken. The upshot is to say that aqueous corporate as a sector is declining in significance. This may be partly be driven by the fact that CAD systems with graphics capability have eaten into this sub-sector just by being more prevalent and available at low cost than before.

EcoSolvent & Latex Markets (ES & LX)

We would like to be able to comment openly on the competition between EcoSolvent offerings and Latex, but, as always, since Latex is a one-vendor market for all intents and purposes of statistical analysis, we cannot easily do that without getting into vendor share commentary, which we will not do. What we can however say is what is know, which is that EcoSolvent puts up around 70 different competitive products against Latex. That had been a pretty effective way of flooding markets in the past and distracting from the Latex offerings of a single vendor, Additionally that single Latex vendor spent their early market years with an indirect competitive positioning to EcoSolvent. We would say

now however that the lurking disadvantage of such a wide EcoSolvent offering from 3-4 major vendors - being the cost of development of so many products, and the increased competition *among* EcoSolvent vendors it promoted – is coming home to roost. EcoSolvent vendor performance is beginning to look a little tired, especially economically-speaking.

On the Latex side HP have always pursued a dual strategy of lowend and highend products. Lowend is a big competitive target while highend with the 3xxx series has been a vehicle for developing beyond graphics into decorative markets. Decorative markets started out small, but HP believes, perhaps rightly, that they have more than average leveragability in the future by digital uniqueness in providing diversity of print content. In this area Latex is perceived to have a certain drying time and odor advantage over EcoSolvent.

Aggressive Solvent Markets (AS)

Nothing different from what we wrote last year: “Large-scale and outdoor digital graphics began many years ago as a direct consequence of the availability of aggressive solvent systems. They are still out there in the installed base, and Asian vendors still sell them , but they are as good as gone as new systems in North America and the EU. We may be undercounting them a little, but the trend is not in doubt. Partly no one liked the effects of VOCs from the ink, but it was also a market of little interest to vendors whose control of a very low-priced ink market vanished early on.”

UV Markets (UV)

We pointed out last year that UV has now become the sector which pays a relatively high acquisition cost for systems capable of true burst-speed seasonal response to demand at factors of up to 20X demand over average seasonally. UV is also a focal point now for technology and platform development and just growth. It is mostly a separate sector from the low end R2R Aqueous, EcoSolvent and Latex markets, though newer sub-\$100K UV R2R systems are pushing down towards the upper end of the EcoSolvent/Latex market. Does this mean that they will capture highend EcoSolvent/Latex customers, who are essentially a separate and much more numerous channel or is this just an expansion of the capabilities of lowend UV Flatbed users? It is not yet clear.

In the following statistics around sales units of UV systems it will be seen that YOY growth is exceptional 16 to 17. It certainly is growth and is healthy, but caution is advised in reading too much into annual growth rates since – especially in high acquisition cost markets like UV – the sales cycle is well-known not be simply annual but to be spread over 3-5 years often. So the real longer-cycle rates of growth are probably significantly lower than YOY would suggest.

These are the 2017 sales compared to 2016 by UV sub-sector:

Sales units			
	2016	2017	cagr
UVLEFB	2,267	2,342	3.31%
UVHEFB	658	812	23.40%
All UVFB	2,925	3,154	7.83%
UVLER2R	448	847	89.06%
UVHER2R	161	167	3.73%
All UVR2R	609	1,014	66.50%
All UV	3,534	4,168	17.94%

This is the same analysis for output of print by UV sub-sector:

M2 Printed

	2016	2017	cagr
UVLEFB	145,907,394	170,646,870	16.96%
UVHEFB	122,578,487	143,626,221	17.17%
All UVFB	268,485,881	314,273,090	17.05%
UVLER2R	3,442,592	4,507,469	30.93%
UVHER2R	68,861,828	72,350,391	5.07%
All UVR2R	72,304,419	76,857,860	6.30%
All UV	340,790,301	391,130,950	14.77%

All this UV data together suggest that UV is growing into its own identity from starting as a convenience flatbed format, progressing to volume capability and now developing into a highly-flexible large-sale realization format. It does not exist totally on its own as HP's 3xxx series is a R2R competitor with its own identity (see above) and there are also Highend soft signage systems which are NOT included in this forecast whose own growth in display graphics is significant. But UV's ability to generate large volumes fast - which sometimes translates to being very large areas of print fast - has contributed to the real development of new markets especially around sports franchises and events.

UV has actually begun to go beyond just display graphics and has become the platform for development of new markets derived from WF platforms. An obvious example is the nearly-half-billion-dollar market for deep plated decoration flatbed systems from companies like Mimaki, Mutoh, Roland, InkCups, EPS etc. But we have also seen very interesting crossover-type products from say INCA Digital (Onset X4) in conjunction with Fujifilm, which are greatly-enhanced print quality systems with relatively low cost positioned for commercial printers who want to do microruns maybe of book covers, test marketing of packaging or print of rigid displays. Then there are the UV-based corrugated packaging systems from vendors like EFI and Durst. It goes beyond just applications into real enhancement of the UV digital print function for a wide range of potential markets.

At the very high-end of the Highend flatbed UV market there is a sub-sub-sector we call Super High End (SHE) for systems which are close to \$1M or over and which generally can print around 5,000 SF/h or more. This is the history of sales of those systems as we classify them with a rather fixed vendor and product membership including 2017: