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Key Trends in the Hardware and Consumables Markets

Charles Brewer
BTA West Dealer Conference
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ACTIONABLE INTELLIGENCE

Biography and Contact

Charles Brewer is president of Actionable Intelligence, a US-based market research firm dedicated to the digital imaging industry. With over 20 years covering business and technology, Mr. Brewer was an editor for *Inc.* magazine and *ComputerWorld* during the 1990s and later the managing editor of Lyra Research's *The Hard Copy Supplies Journal*. Launched in 2009, Actionable Intelligence has established itself as a thought leader in the digital imaging space. Its website, www.Action-Intell.com, has attracted hundreds of thousands of visitors from across the industry, including executives from OEMs, remanufacturers, third-party supplies vendors, and specialty chemical makers, along with legal experts and financial analysts as well as many other industry watchers. In 2015, Actionable Intelligence added 3D printing to its practice areas to help its hardcopy clients to pursue the opportunities that additive manufacturing technology provides.

Office: 508-528-1297
Mobile: 508-740-1881
cbrewer@action-intell.com

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Agenda

1. Industry overview
2. Hardware review
3. Trends in the 3rd-party supplies industry

Industry Overview

The State of the Industry

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- The worldwide market for hardcopy equipment and consumables continues to soften
  - Earlier in June, IDC reported that Q1 was the industry's 8th consecutive declining quarter
    - Q2 numbers for FY16 indicate that the downward trends continues
- The industry simply has too much capacity
- All of the hardware vendors that we follow have indicated their revenue fell during the opening months of 2016
  - US-based hardware manufacturers continue to struggle this year as they have for the past few years
  - Japanese firms also expect 2016 to be a tough year as the yen strengthens
- But the consumer and office hardcopy market remains huge
  - Worldwide revenue from hardware and cartridge sales in 2016 will top $100B
- Many firms expect markets to stabilize in 2017

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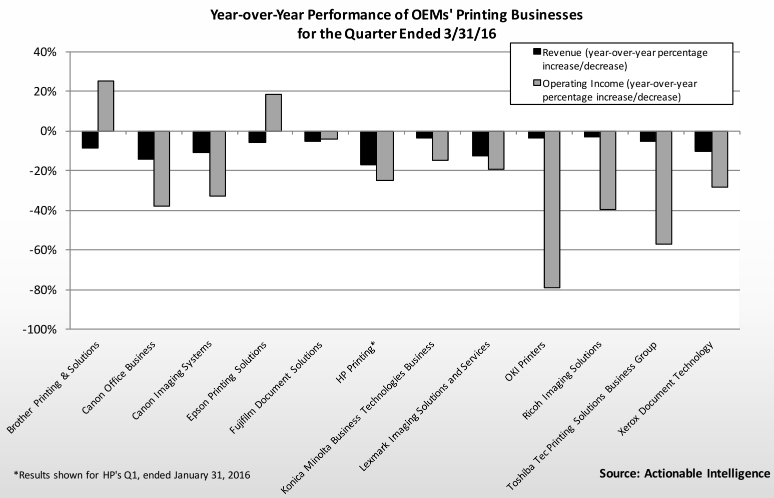
A Chart is Worth a Thousand Words



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There Is Good News in North America

- Vendors are reporting strength in the US market
- The healthy economy and rising employment fuels demand
  - The unemployment rate has been at or under 5% throughout 2016
  - 94% of 11,000 US-based employers polled in the latest Manpower Employment Outlook Survey said they will either increase or maintain staffing levels in Q3
- Many vendors have indicated that ASPs are increasing and the overall installed base includes a growing number of higher-volume units
  - Shipments of business inkjets are growing along with machines featuring built-in CISS units
  - Color electrophotographic MFPs remain popular
- OEMs have launched a slew of new devices in hopes of sparking sales and grabbing more the existing market

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Big Uptick in Introductions in First Half of 2016

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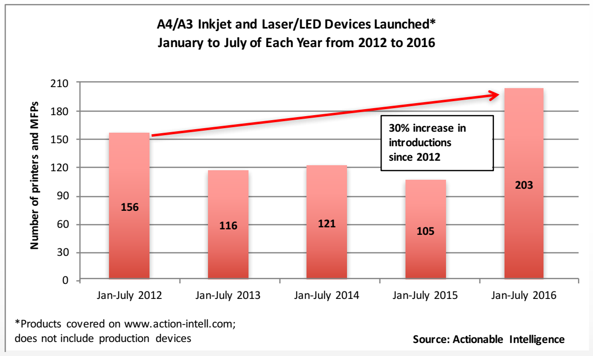

- Last time we saw such an onslaught was 2012, but …
- 2012 included products in categories certain vendors have now exited
  - Inkjets from Dell, Kodak, Lexmark, and even Samsung
- BTW, this is not all-inclusive data: no “drupa effect”

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Hardware Trends

Changing Technologies

- Even at this late date, new technologies continue to evolve to support features found on latest machines
- Light sources are changing and LED print heads are growing in popularity
    - Brother, Dell, Fuji Xerox, Oki, Ricoh, Toshiba, Xerox, and others have released machines based on LED engines
- New toner sets are being deployed regularly
    - Polyester-based toners are increasingly popular and provide lower melting points to support less power consumption and smaller fuser units
- Ink formulations are being tweaked
    - Faster print speeds demand faster-drying inks
    - Some inks are being reformulated to reduce overall operating costs
- Solutions for scanning and archiving are essential for today's MFPs
    - Front panel displays provide access to enhanced functionality
        - Many machines now feature a table-like interface
    - All new hardware must support mobility and printing from the cloud
    - Security is also critical; everyone is concerned about a printer/MFP hack

Hardware Market Segments



What's Hot?

- Business inkjet, especially page-wide
- CISS high-capacity ink tank inkjets
- Color laser/LED MFPs, especially A4 but also A3

What's Not?

- Consumer cartridge-based inkjets
- Low-end color laser/LED, especially printers
- Mono laser/LED feeling the impact of emerging market slowdown


A New Mantra is Being Chanted

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- The industry's "better, faster, cheaper" refrain seems to have been replaced by "smaller, more connected, more secure"
  - Hardware with smaller footprints seem to be very popular with office users
  - Vendors have invested heavily in allowing end-users to print securely whenever and from wherever they want
    - Remote printing is not just for road warriors any more
- In all but the lowest segments, the feature sets on most imaging hardware now includes software to seamlessly integrate the device into business processes
  - Hardware vendors must make money regardless if end users print
- Vendors are also providing their channels with customizable solutions to better penetrate vertical markets

Battling over Share Is Fierce

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- After years of losing share to an increasing number of A4 devices marketed by old-school copier companies, printer OEMs are fighting back
  - HP is preparing to launch new lines of A3 inkjet and LaserJet devices
    - Recently, HP released new Sharp-based mono and color A3 units
  - With an expanded feature set, Lexmark's XC8160 targets the A3 market
    - Selling at nearly $26K, it carries an A3 price tag!
- With numerous "mega launches," copier firms say "bring it, printer people!"
  - In the past year, most vendors including Canon, Konica Minolta, Kyocera, OKI, Ricoh, Samsung, Sharp, Toshiba, and Xerox have announced dozens of new A3 machines
- Copier and printer vendors have also expanded their A4 portfolios this year
  - New machines include printers and MFPs

Major A3 Laser/LED Launches in 2016 (So Far!)

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Mono

Canon imageRUNNER ADVANCE 6500 and 8500 families ($18,000–$53,000; 55-105 ppm)
Sharp MX-M1055/MX-M1205 ($42,000–$53,100; 105-120 ppm)
Toshiba e-STUDIO5008A/8508A ($7,298–$43,222; 20-85 ppm)
Xerox WorkCentre 5865i/5875i/5890i ($25,245–$43,495; 65–90 ppm), WorkCentre 5945i/5955i ($15,600–$21,345; 45-55 ppm)

Color

Konica Minolta bizhub C227, C287, and C258 ($7,590, $9,090, n/a, 22 ppm, 28 ppm, 25 ppm)
Kyocera TASKalfa 2552ci and 3252ci ($8,110-$9,224; 25–32 ppm)
Ricoh MP C3004, C3504, C4504, C6004 ($12,689–$22,015; 30-60 ppm)
Sharp MX-3050N/3550N/4050N/5050N/6060N ($9,625–$19,525; 30-60 ppm) & MX-3070N/3570N/4070N/5070N/6070N ($12,925–$22,825; 30–60 ppm)
Toshiba e-STUDIO2500AC/5005AC/7506AC ($5,339–$42,055; 20-85/75 ppm)
Xerox WorkCentre 7220i/7225i 7830i/7835i/7845i/7855i, 7970i ($6,999–$31,000; 20 –70 ppm)

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A Wide Range of A4 Devices Unveiled This Year

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Mono

Brother L5000 and L6000 series ($199–$699; 42 & 48 ppm)
Canon imageCLASS LBP151dw/251dw/253dw/ 351dn/352dn, MF414dw/416dw/419dw/515dw, D1520/D1550 ($199–$3,395; 28-65 ppm)
Dell S2830dn and S5830dn ($279 & $999; 40 ppm & 63 ppm)
HP LaserJet Pro M501 ($549, 45 ppm)
Samsung M3015DW/M3065FW ($159, $249; 31 ppm)
Xerox WorkCentre 3655i ($2,354+; 47 ppm)

Color

Dell S5840cdn ($999; 50 ppm)
HP LaserJet Pro MFP M377dw ($489; 25 ppm)
Kyocera ECOSYS P7040cdn ($2,593; 42 ppm), TASKalfa 406ci ($4,552–$7,505; 32–42 ppm)
Lexmark CS720/CS725/CS820 & C4150/6160 CX725/CX820/CX825/CX860 & XC4140/4150/6152/8155/8160 ($899–$25,996; 40–60 ppm)
Ricoh MP C406 ($5,745; 42/36 ppm), SP C435DN ($1,069; 37 ppm)
Samsung C3010DW/3060FW ($449–$549; 31 ppm)
Xerox WorkCentre 6655i ($3,270; 36 ppm)

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Lots of Activity in Inkjet Space

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- The inkjet market has contracted significantly as printing in the home has dropped
  - Firms such as Kodak, Lexmark, Memjet, and Samsung have exited the desktop inkjet space
    - Since 2008, HP's consumer hardware unit shipments, which are mostly inkjet, are down 68.5%
  - For many 3rd-party supplies vendors, ink SKUs no longer offer the big revenue opportunities that they once did
- This year we've seen renewed interest in the consumer market
  - For the first time in many years, HP made some noise about a Deskjet launch
  - Canon refreshed its MAXIFY line
- Inkjet vendors are looking for revenue opportunities with higher-margin products and services in the consumer space
  - Machines featuring continuous ink supply systems (CISS) are very popular with end users and offer vendors better hardware margins
    - End users like the machines because of lower printing costs and intervention rates
- HP continues to expand its Instant Ink program

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Inkjet Vendors Are Betting on Office Printing

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- With the consumer market in serious decline, it's crucial for inkjet vendors to place their machines in more businesses
- Although inkjet hardware shipments are down, HP has indicated that more than half its supplies revenue comes from ink cartridge sales
  - In 2015, HP supplies sales totaled just under $14B
- Epson says annual unit shipments of its home printers will decrease to approximately 30M this year, down from just under 60M in 2010
  - Combined shipments of its office printers and its high-capacity ink tank machines in 2016 will top 25M units
  - Despite the sharp decline in SOHO units, this year the firm predicts its ink revenue will exceed the approximately ¥220B ($2.1B) it achieved in 2010
- Canon predicts its total desktop inkjet revenue will dip to ¥351.9B ($3.3B) in 2016 from ¥366.5B ($3.5B) last year as unit shipments flatten and the yen strengthens
  - Canon seeks to take share from Epson in emerging markets
- Brother has been tight-lipped about its office inkjet business
  - Brother hasn't had much success with its business-class inkjets

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Inkjet Launches in 2016

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CISS Inkjet

- HP enters the fray with DeskJet GT 5800 series
- Only Epson offers CISS in developed markets: EcoTank line
- Brother responds with U.S. launch of INKvestment MFC-J985DW XL (cartridge-based but ships with 2 years of ink)

PageWide Inkjet

- HP announces new PageWide series, 14 models, $489–$2,799
  - PageWide 300
  - PageWide Pro 400
  - PageWide Pro 500
  - PageWide Enterprise Color 500
- Epson is developing "linehead" inkjets and is preparing for launch

Other Business/Office Inkjets

- Canon refreshed its SOHO MAXIFY line with MAXIFY iB4120, MB2120, MB2720, MB5120, and MB5420 targeted at verticals
- Epson WorkForce Pro M5000 mono units and WF-2700 series
- HP OfficeJet Pro 8210/8700, OfficeJet Pro 6960/6970
- Brother INKvestment MFC-J985DW

Consumer Inkjets

- HP breathes new life into new low-end all-in-one market with DeskJet 3755; tiny unit with roller scanner and Instant Ink Ready ($69.99; 8 ppm B&W and 5.5 CMYK)
- Epson Expression Home XP-330, XP-430, XP-434
- Epson WorkForce WF-3750/WF-3760

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Trends in the 3rd-Party Supplies Industry

Various Forces Are Driving Down Cartridge Consumption

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- The hardware population is shrinking globally and fewer machines means weaker demand for cartridges
  - HP recently announced it will spend $285M to buy back channel's excess consumables inventory
- New OEM initiatives will further erode cartridge sales
  - As more inkjet CISS-enabled hardware is released, ink cartridge consumption will fall
  - MPS programs continue to drive down printing output
    - Changing hardware usage patterns will further lower hardcopy generation
- As noted earlier, hardware manufacturers are looking for ways to make money when customers **<u>don't</u>** hit the "PRINT" button as well as when they do.
  - Regardless, most printer businesses reap over 50% of their revenue from consumables sales
- Hardware manufacturers are now attempting to take grab some of the competition's consumables sales any way they can.

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MPS Provides an Avenue to More Consumables Revenue

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- Copier firms are partnering with 3^{rd}-party supplies vendors to attack the printer installed base
  - MPS contracts have made it easier to take over fleets of the competition's machines
- MPS has been great news for 3^{rd}-party cartridge vendors
  - In the US, Clover has become a major supplier to various OEMs (mostly copier companies)
  - Chinese firms have lost share to regional remans in the US and Europe
- Thanks to MPS, the number of 3^{rd}-party supplies for higher-end machines is also growing
  - We've seen a growing number of toner containers for A3 devices
- Despite the growing availability, demand for non-OEM color SKUs remains weak
  - Quality improvements have been made but non-OEM color consumables are still considered inferior
- OEMs appear to be willing to cut consumables pricing to better compete with 3-party cartridge vendors
  - OEMs now seems to be willing to give up some margin to gain back consumables sales

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Realignment in the Western 3rd-Party Supplies Industry

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- The Top 5 non-OEM supplies vendors in Europe are in flux
  - Pelikan, Turbon, and KMP are losing market share
    - Pelikan AG's parent is looking to sell and rumor has it that Turbon may be an acquisition target
  - Clover's share of Europe's third-party supplies market is flat
    - Today, the firm appears to be investing more in its reverse-logistics operations
  - France's Armor is growing
    - We estimate the firm has approximately €250M in annual turnover
    - Annually, the firm produces nearly 3M toner cartridges and 6M ink cartridges
- With Clover the industry's dominant force, things in the US are stable
  - With annual revenue now north of $1.1B, the firm is by far the largest producer of third-party supplies in the world
    - We estimate that Clover's total cartridge sales are worth around $700M annually
  - LMI is the second largest non-OEM cartridge vendor based in the US

Some Realignment in China Too

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- Despite the down market, 3rd-party supplies firms in China are growing
  - Chinese vendors are growing in emerging markets but sales to the West are cooling
    - Sales of infringing cartridges to the US and Europe are flattening
- Consolidation within the Chinese industry has led to a redistribution of market share
  - Ninestar/Seine has emerged as China's number one cartridge producer
    - The firm's sister company Apex is one of a group of firms attempting to purchase Lexmark
  - Thanks to its roll-up of several manufacturers—Kolion, Mito, and Retech—chemical maker Hubei Dinglong, a publicly-traded, specialty-chemical manufacturer, has entered China's top ranks of cartridge producers
    - The firm is also growing its component production capacity through recent acquisitions
  - In terms of revenue, Print-Rite remains in the Top 5 but the firm's move out of the low end of the market has cut its cartridge output, especially of desktop ink cartridges
    - Print-Rite is now a leading ink and toner manufacturer in China and markets 3D printers
- Will drum maker Suzhou Goldengreen be the next big Chinese player?
  - The firm is Cartridge World's largest investor and Goldengreen is said to be going public

Apex Seeks to Acquire Lexmark

- In April, Apex Microelectronics, PAG Asia Capital, and Legend Capital announced plans to acquire Lexmark
  - If approved, the deal will be an all cash transaction worth $3.6 billion ($40.50/share)
- Apex is publicly-traded and appears to have deep pockets (albeit not as deep as some of its partners!)
- Lexmark emphasizes there will be no change in headquarters, leadership, "business as usual"
  - We think some production is bound to be shifted to Zhuhai
- Deal will enable Lexmark to penetrate Asia and take advantage of Apex and Seine's manufacturing capacity for printers and consumables in China
  - Lexmark has been involved in several import lawsuits that have had a major impact on the 3rd-party supplies industry, so we'll be watching to see if it softens its legal stance
- If Chinese firms are looking to invest, we feel it's a buyer's market

Lots of Activity Worldwide to Protect Markets

- Over the years, OEMs have developed effective ways to combat intellectual property volitions domestically as well as overseas
- Hardware manufacturers now work closely with the US International Trade Commission (ITC) and federal courts to protect US markets from infringing products
- In the past decade, OEMs have also become increasingly active pursuing IP infringement outside of the US
  - Various hardware vendors have filed lawsuits in the European Union
  - Although less frequent, we have seen more litigation in countries with emerging economies including Brazil, China, and Russia over the past 10 years
- Because of the expense and effort, OEMs typically do not rush into court
  - With only a few exceptions, hardware vendors win the cases that they file

The ITC Steps Up IP Protection in US

- OEMs have a long track record of working with the ITC to prevent infringing goods from entering the US
- We used to see only a handful of seizure-and-forfeiture orders each year but…
  - Over the past 2 years, US Customs has nabbed scores of containers full of infringing cartridges
    - In 2015: 60 orders were issued to 38 companies
    - As of the end of July, 58 orders had been issued to 42 companies
- OEMs and the authorities are working more closely than ever before to rid the US market of infringing products

Recent News from US Federal Courts

- This year we have witnessed the resolution of various cases
  - Xerox and Hana reached an agreement over solid ink sticks
  - Canon and Katun have settled their toner container disput
  - The long-running Nukote v. Clover suit has ended
  - HP and Memjet came to an agreement
- Despite the all agreements, Toshiba continues to press Katun for its alleged infringement of toner cartridges
- Canon's suit against Color Imaging and General Plastic also continues
- We've heard that Lexmark has initiated a demand letter campaign
  - Perhaps it is business as usual after all
- 23 individuals were arrested for running a telemarketing scheme involving toner and ink cartridges that bilked some 50,000 victims out of $126 million

Overseas Legal News

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- OEMs have notched some big wins in courtrooms outside of the US
- HP may have had the biggest victory
  - The firm reached a court-mediated settlement with Speed Infotech in China, Speed agreed to cease the sale of infringing products in the PRC
  - This case may have an impact on the 3rd-party supplies industry in China
  - HP also won cases in Spain and Poland
- HP's case in China may be a trend-setter
  - Epson has also sued Print-Rite in China
- Canon was awarded preliminary injunctions in Brazil and the firmed settled a "dongle gear" suit in the UK
- Epson and Ninestar and its distributors settled a suit in Japan
- Samsung won its toner cartridge suit at appellate level in German

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Key Takeawys

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- The down market we began to see last year has persisted in 2016
- Worldwide sales have been down for all vendors this year
- Most firms, however, have indicated that the US market is the strongest
- Things were expected to improve worldwide in H2 but Q2 numbers suggest otherwise
- Despite all the market weakness, we've seen more hardware launches in the first half of 2016 than during the same period in any other year
- Overall, the trend is toward higher-end devices with enhanced feature sets and bigger price tags
- Worldwide, the overcapacity in the 3rd-party supplies industry is forcing firms to make adjustments so they can compete
- The industry in China is consolidating and market share is shifting between the leading firms, while things are more stable in other regions
- As always, the battle between 3rd-party supplies vendors and OEMs is fierce

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Questions?

Charles Brewer
President
Office: 508-528-1297
cbrewer@action-intell.com

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