



Dealing with Industry Transformation and Massive Market Disruption

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IDC Imaging, Printing, and Document Solutions

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Office Printing Market in Transition



MARKETS

- Industry consolidation creates ultra competitive environment
- Enterprise and large business
 - Focus on controlling expenses
 - Installed base is large but customers are holding equipment longer
 - Replacing not adding hardware
 - Color penetration has peaked
- SMB is prime target for growth
 - New customers and new pages
 - Color page growth in A3 and A4



PRODUCTS

- Convergence of A3 and A4
 - Convergence of copiers and printers
 - Transition to MPS
 - All vendors now pursuing A4 strategies
- Differentiation through software
 - Price/performance for laser has peaked
 - Embedded and add-on solutions enabled by platform ecosystems
- Ink and laser co-existing in the office

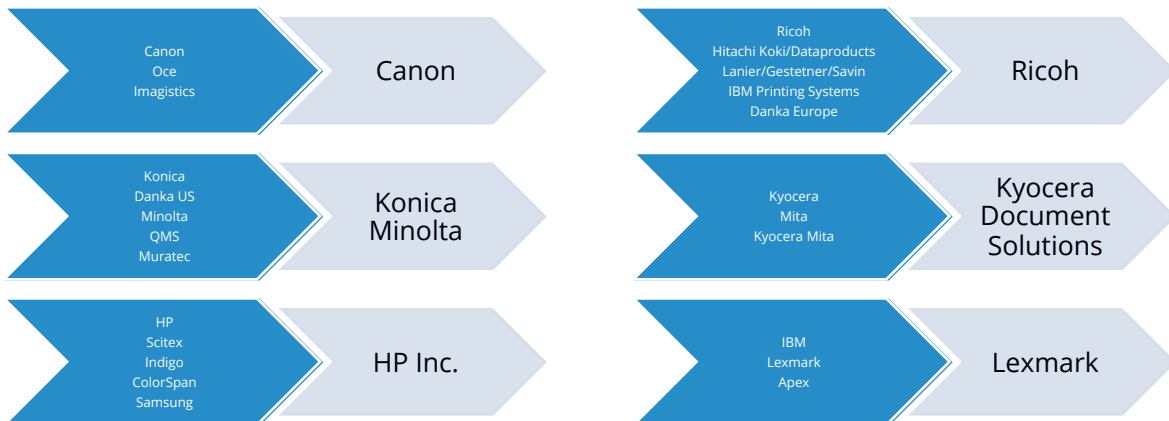


BUSINESS MODELS

- Vendors attacking SMB with multiple strategies
 - Blended A3/A4
 - Channel and vendor fulfilled MPS
 - Subscription services
 - Packaged MPS solutions
- Channel Upheaval
 - Convergence of contractual and transactional channels
- Buyer Influence expanding
 - Multiple budgets
 - FM, IT, Procurement, and LOB



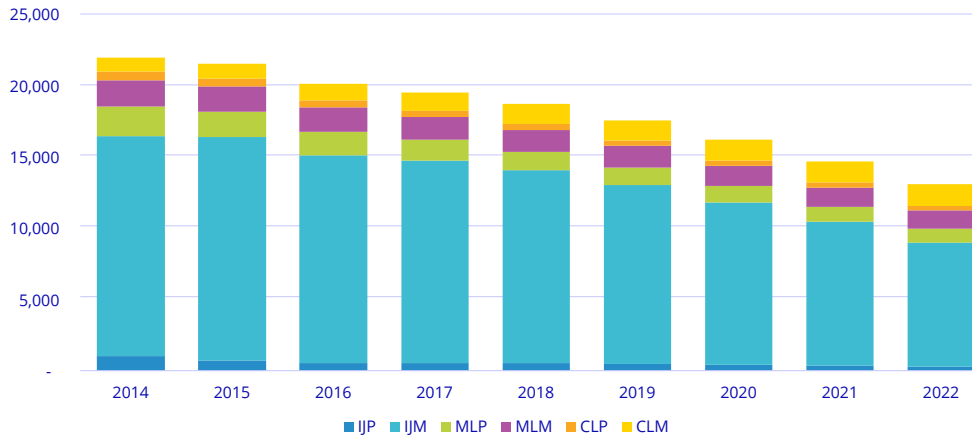
Industry M&A and Consolidation Over the Years



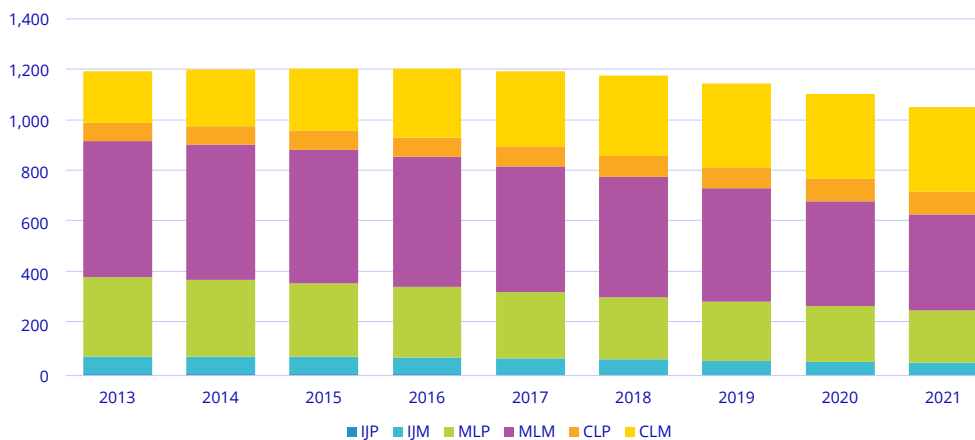
- Market exits – Calcomp, Casio, Centronics, Olivetti, Digital Equipment
- Transitions
 - Tektronix to Xerox to ?
 - Sharp to Foxconn
 - Printronix/Mannesmann Tally/Genicom to Printronix



US Unit Shipments by Device Type (K)



US Page Volume by Device Type (B)



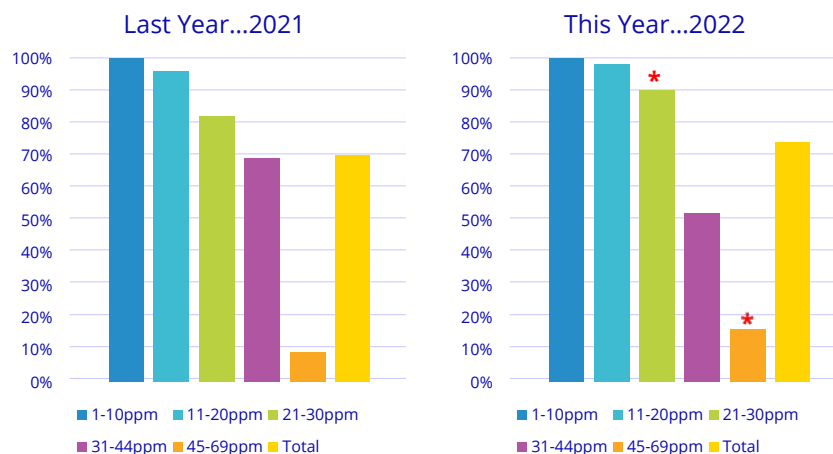
A3 versus A4 MFP Shipment Growth

Color/Mono	Speeds	US A3 CAGR %	US A4 CAGR %
Color	Total	-2.7%	+5.5%
	1-10ppm	NA	-32.2%
	11-20ppm	-16.0%	-6.3%
	21-30ppm	-6.7%	+11.6%
	31-44ppm	+1.1%	+4.8%
	45-69ppm	-2.8%	+11.0%
Mono	Total	-8.0%	-3.2%
	1-20ppm	NA	-38.4%
	21-30ppm	-15.0%	-1.7%
	31-44ppm	-7.8%	-3.4%
	45-69ppm	-5.2%	-3.4%

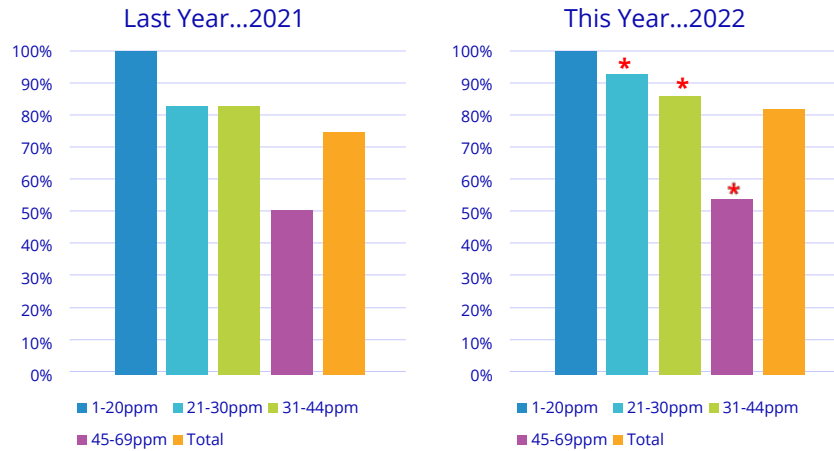
- A3 Color is slowing...negative CAGR, flat/negative last year
 - Small growth in color 31-44ppm
- A4 Color is growing...stronger growth than last year
 - Solid growth in 21+ppm color
- A3 Monochrome is declining more than last year, particularly 21-30ppm
 - Future of this segment?
- A4 Monochrome is declining less than last year
 - Decline is slower than A3

Color A4 Penetration %

Increases in 11-20ppm, 21-30ppm & 45-69ppm



Monochrome A4 Penetration %



Hardware Shipment Growth – Printers

Color/Mono	Speeds	US CAGR %
Color	Total	-6.6%
	1-10ppm	-40.1%
	11-20ppm	-20.8%
	21-30ppm	-4.7%
	31-44ppm	-6.9%
	45-69ppm	+5.7%
Mono	Total	-7.4%
	1-20ppm	-46.7%
	21-30ppm	-16.0%
	31-44ppm	-6.0%
	45-69ppm	-3.8%

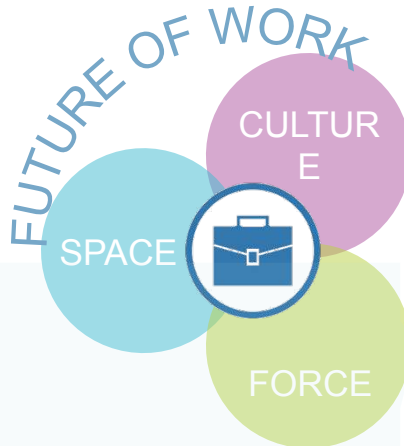
- Printer growth is limited to highest speed segments.
 - Color grows in 45-69ppm
 - Monochrome maturing
 - Low-speed segments getting creamed in color & monochrome

Future of Work Scope: Culture, Space, and Force

"Technology is changing **work** as we know it. This impacts organizations' **culture**, required skills, the way talent is sourced, the **workspace**, and the nature and makeup of the **workforce** itself."

Roberta Bigliani

"...work is no longer strictly associated with a physical place, nor to defined times of the day. Workspaces will be redefined, and multiple configurations affecting the place of work, tools, and people have to be created and refined..."



"...companies across all industries will adopt a borderless and virtual organization culture. They will turn to online communities and platforms to acquire skills and capabilities. Traditional talent sourcing models will evolve and move toward a quicker, virtual, borderless, and task-oriented approach..."

"...the workforce of the future will see augmented humans and machines collaborating and transforming the nature of work..."



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In the Next Five Years...



More workers will be self employed.



Knowledge-intensive roles **will have a bot, smart agent, or other piece of cognitive software as "co-worker."**

Enterprises will increasingly move from traditional talent sourcing strategies and models toward **virtual, borderless, and task-oriented** approaches, integrating **online communities and platforms to acquire** skills and temporary staff.



More enterprise transactional processes will have no human intervention.

Managers will expect to **reach their workforce regardless of locations and time boundaries** putting the existing labor laws under pressure.

Human-machine collaboration will increase **productivity.**



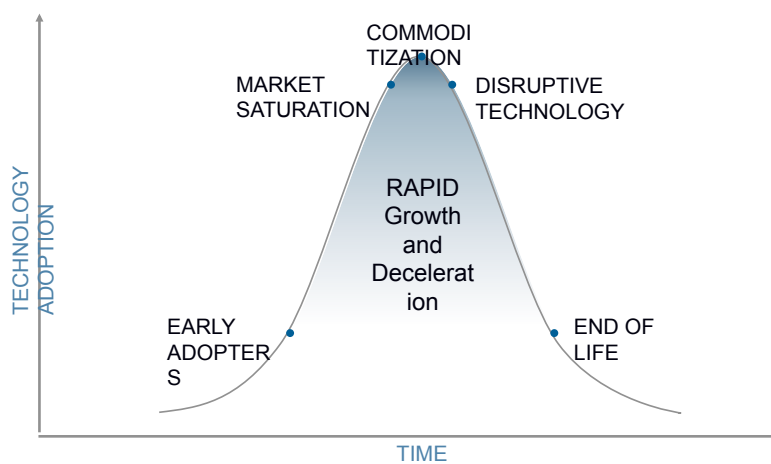
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Office Market is Ripe for Disruption

“

A TECHNOLOGY THAT SIGNIFICANTLY ALTERS THE WAY THAT BUSINESSES OPERATE. A DISRUPTIVE TECHNOLOGY MAY FORCE COMPANIES TO ALTER THE WAY THAT THEY APPROACH THEIR BUSINESS, RISK LOSING MARKET SHARE, OR RISK BECOMING IRRELEVANT.

B2C Market: Transformation Occurs Quickly



RECORDED MUSIC

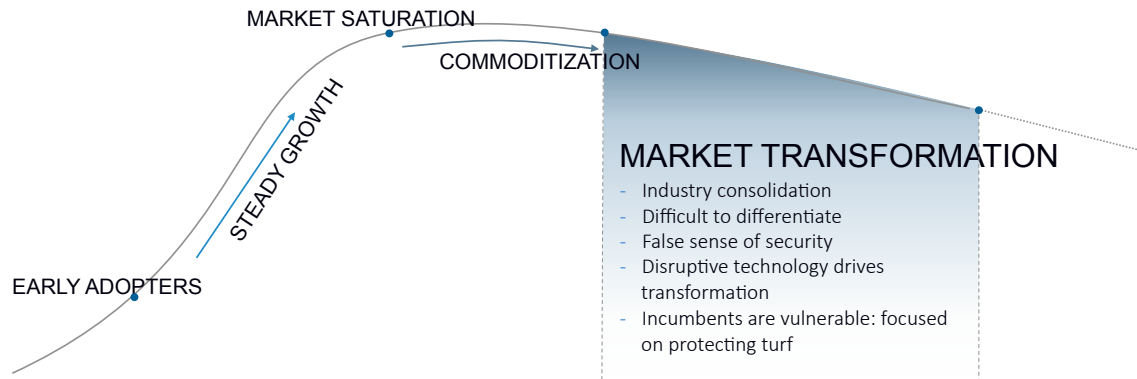


ANALOG

DIGITAL

CONSUME ON DEMAND

B2B Market: Transformation Takes Time



Living in the Tail of a Mature Market

“

THE REASON WHY IT IS SO DIFFICULT FOR EXISTING FIRMS TO CAPITALIZE ON DISRUPTIVE INNOVATIONS IS THAT THEIR PROCESSES AND THEIR BUSINESS MODEL THAT MAKE THEM GOOD AT THE EXISTING BUSINESS ACTUALLY MAKE THEM BAD AT COMPETING FOR THE DISRUPTION.

Clayton Christensen



Vendor Strategies Fall Into Two Primary Categories



BACK TO THE FUTURE

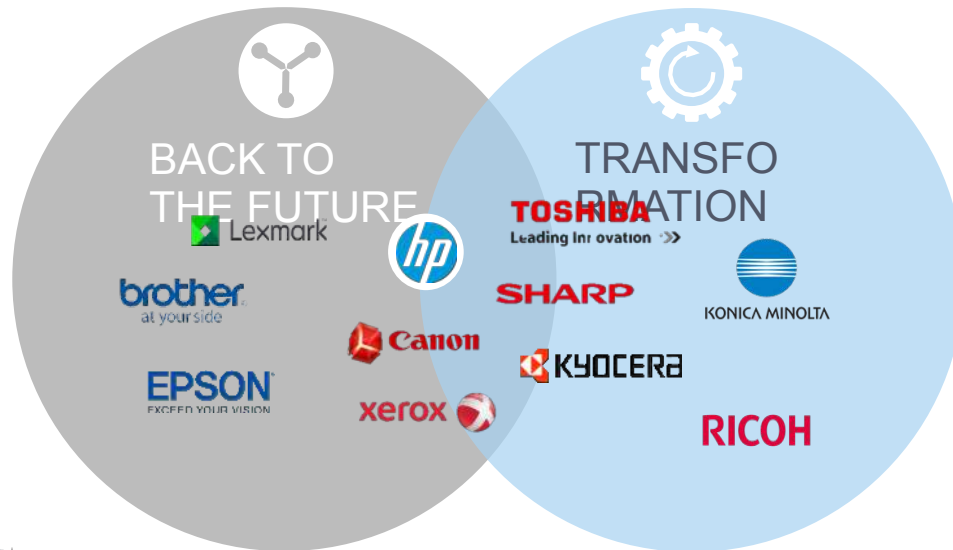
- Refocus on the core business of print and imaging
- Shore up core markets: protect turf
- Expand into print markets where vendor is currently under-penetrated
- Innovate through technology and solutions
- Migrate base to a contractual model
- All about service innovation and execution



TRANSFORMATION

- Expanding beyond the business of print and imaging
- Pursue new business opportunities adjacent to print
- Leverage core assets to move quickly
- Innovate through R&D and partnering
- Growth through acquisition
- Transition more business to a services-led model
- New LOBs help sustain the core

Strategic Approach



The Search for Adjacencies



Brother

brother
at your side



- Shore up core markets and maintain strength in consumer and SOHO
- Shift focus from low end SMB to mid-market and office workgroup
- Developing new market and channel strategy to target large enterprise



- Limited distribution model for its dealer and reseller product line for enterprise-level opportunities
- Building a comprehensive service and support structure to support channel partners
- Dealer sales and net new business up approximately 40% since launching initiative



- Unveiled a new product brand (Workhorse)
- Features include faster performance, improved print quality, more paper handling, security, higher toner yields, lower operating costs, and mobile support
- Workhorse product line includes mono and color printers and MFPs



- Building a contractual business
- Targeting key vertical opportunities in education, health care, and retail
- Creating a Volume Print Program in conjunction with managed print services offerings



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Canon

Canon



- Maintain its leadership position in office workgroup and expand into tangential markets
- Grew 3.8% WW in 2017, exceeding competitor performance in Americas
- Organic growth and M&A plans
- Focus on Information Management as a key pillar of its document services approach
- New EVP and GM of Canon BISG – Sam Yoshida



- imageRUNNER ADVANCE – 3rd generation
- Platform drives support for IoT, AI, cloud, security, predictive maintenance analytics
- Agile and Vera as new security partners



- Canon provides both horizontal and vertical-specific workflow solutions and services
- Solutions built around software IP: NT-ware's uniFLOW; IRIS capture, and Therefore
- Driving organizational PDM maturity – from print optimization to business optimization



- Push to the enterprise with managed services (25% growth)
- Expansion of its solutions business
- Future of Work w/AI, robotics...recognized patent leader
- Investment outside of print: mixed reality, 3D machine vision, nanoimprint lithography, next-gen image processing, medical imaging, DNA testing systems, CMOS image sensors, etc.



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Epson

EPSON®



- Looking to capitalize on market maturity and stagnation
- Leveraging investment in consumer to push up market
- Disrupt the office printing business from the inside out
- Touting proven core inkjet technology to attack laser
- No legacy products and historical business models to protect



- PrecisionCore print head technology
- Leverageable across multiple product categories and business segments
- PrecisionCore scales from the top down as opposed to from the bottom up
- Strong heritage in scanning provides a path into workflow and other document services



- EcoTank platform to disrupt traditional consumables model (lifetime supplies)
- Attempting to pioneer a new "SuperTank" category
- Replaceable Ink Pack System (RIPS) provides alternative to contractual laser
- Quickly introduced both EcoTank and RIPS-based models in low end of SMB
- New WorkForce C20590 is first foray into workgroup A3 MFP



- Targeting SMB and enterprise with office inkjet strategies
- Pushing alternative print consumption models to attract "new" customers
- Production print and commercial graphic arts

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HP, Inc.

hp



- Refocus and reinvest in the core business of print
- Shore up its traditional A4 business
- Expand presence and market share in A3
- Deeper engagement with high-value OE channel
- Shift more customers to contractual sales model (across all segments)



- Samsung acquisition to gain control of A3 platform
- Solutions and apps to drive workflow automation and optimization
- SIEM tool integration (McAfee, Microsoft, others)



- Using "security" to differentiate from competitors
- Driving thought leadership on security messaging
- Initial focus on device hardening but expanding deeper into content protection
- Secure MPS and other professional security services



- Targeting 12% market share in A3 by 2020
- Push PageWide inkjet deeper into medium-large-size businesses
- Ahead of plan in Europe & Asia, but behind in US
- 3D Printing
- Targeted growth in graphic arts and production

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Konica Minolta



- Transition from a “box company” to an IT Services business
- Growing core and transformative businesses
- Acquisitions in key core markets (Muratec)
- Workplace of the future... people, spaces and technology
- Workplace Hub – IT services platform and ecosystem



- Ecosystem to manage and coordinate IT infrastructure and services across entire IT environment
- Centralized platform enables Konica Minolta and partners to deliver a full range of managed IT services



- Major acquisitions in IT and workflow Services
- All Covered in the United States, Serians in France, Koneo in Sweden, Raber Marcker in Germany, and ProcessFlows in the United Kingdom
- System security and data protection, storage and backup management, onsite installation and support, asset management, professional IT services, help desk services, etc.



- A lot of technology & acquisition activity outside of traditional print
- Reception, conference room, video surveillance security, robotics, IoT, ECM, ERP, VoIP
- 3D printing
- Business Innovation Centers



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Kyocera



- Three-pronged growth strategy
- Core business expansion in hardware, software & services (KFS)
- TASKalfa Pro 15000c high-speed production inkjet
- Kyocera Total Document Services (TDS) 2.0



- All about Databank (ECM and business process)
- Alliance with Databank provides dealers access to business process improvement services
- Direct access to the entire portfolio of Hyland ECM products
- Focus on business process improvement, business process outsourcing (BPO), workflow services, and IT services



- Cloud-based (Microsoft Azure platform) remote monitoring service
- Secure cloud services platform allows Kyocera's dealers to centrally control equipment and HyPAS applications
- Enables remote hardware configuration, report generation and troubleshooting
- Integrated with ECI's e-Automate platform



- Deeper expansion into production market
- Predictive maintenance functionality and proactive toner replenishment
- Open API interface to enable integration between dealer management systems and KFS



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Lexmark



- APEX acquisition signaled a refocus on traditional print business
- Expand Asia Pacific market presence by competing from inside the region
- Divest software business and move to an open-platform solutions approach
- Broader channel strategy that includes all indirect paths to market: OE dealers, IT VARs, online resellers, retail, etc.



- Improved access to China — Asia's largest market
- Access to Chinese government accounts alone offer substantial net new business potential
- Access to in-house, China-based manufacturing
- Better visibility to the aftermarket (e.g., compatible refill and clone supplies)



- APEX provides access to new, lower cost laser engines to better target SOHO and SMB
- Developing channel-specific products for developed markets
- Complete hardware refresh, big year in 2018



- Expand presence in SMB (current market share <5%)
- Growth in A3 and expansion in OE channel
- MPS is an important pillar for driving growth in the midmarket sector



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Ricoh

RICOH



- Ongoing transformation to a services-led organization has been underway for the past few years
- Still working out organizational challenges, profit loss in 2017
- New president and CEO (Joji Tokunaga)



- Several high-profile moves in the managed IT services space, including the well-publicized acquisition of mindSHIFT
- Workplace Services one-stop shop for workstyle innovation & blending physical workplace, practices, processes
- Sustainability management & communication (videoconferencing) services



- Effort to rebalance its direct and indirect channels
- Better support for SMB customers and inline with current customer buying patterns
- Transferred many of its SMB direct sales customers over to dealers
- Targeting a 50/50 split between direct and indirect



- Commercial and industrial printing applications
- Production printers, industrial inkjet, garment printers
- Projectors
- Video conferencing
- Interactive whiteboards
- Targeted vertical solutions (healthcare, higher ed, financial services)



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Sharp



- Leveraging Foxconn to drive core print business
- Target to be in top 3 by 2019
- Moving into B2B opportunities and divesting several consumer markets
- Focusing efforts on whiteboards, signage, collaborative technologies, and MFPs
- New president & CEO (Mike Marusic)



- ¥40 billion investment in operations and infrastructure
- ¥20 billion to distribution
- ¥8 billion on software, dies/ molds related to robotics and digital signage
- ¥12 billion rationalizing and fixing facilities in Japan and China
- Buying power of Foxconn enables lower component costs



- New A4 products (Foxconn)
- Refreshed A3 monochrome entry-level and mid-range.
- Production product line refresh
- Voice recognition & data management to target future smart office & smart factory



- Foxconn partnership with AI startup to enable digital workforce
- Bridge to future products – Water generators, network storage devices, displays and monitors offer diversity

Toshiba



- Focusing on B2B opportunities and divesting consumer businesses
- Differentiate to remain relevant in traditional office print market
- Increasing investment in businesses adjacent to print
- Corporate financial troubles – TABS versus T-TEC



- Digital signage remains a key investment and target market
- Signage solutions targeted at Retail and Hospitality
- Interactive display systems
- OmniChannel networked communications systems



- Differentiating office products in key areas: sustainability and solutions enablement
- Elevate UI customized for key verticals
- Eco MFPs



- Migrating towards solutions and services in areas of MPS, workflow, and security
- Leveraging dealer channel to push MPS and workflow services into SMB

Xerox



- Once again a document company focused on printing technology...for now
- Grow in SMB leveraging multi-brand dealers and channel partners
- Increase penetration in A4 market, where it currently has single-digit share
- Expand leadership position in document outsourcing and MPDS



- Financials indicate challenges
- Well-publicized battle between Icahn, board, and management
- Fuji Xerox deal terminated
- Change in management structure could signal change in strategy
- How will Xerox diversify?



- Introduced VersaLink and AltaLink brands – largest product launch in 110-year history
- Extended ConnectKey support to all of its new A4- and departmental A3-size devices
- Common controller architecture built on top of an app-based ecosystem
- New revenue opportunities for Xerox and channel partners through sales of apps, high-value solutions, and extended services



- A4 and SMB
- Pushing MPS into SMB market through channel enablement (MPS Essentials Suite)
- Workflow automation and professional services
- Further expansion into graphic communications and high-end production color



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Summary

1 MARKET MATURITY

- Shows signs of aging/maturity in forecasts and M&A, but still a huge opportunity
- Hardware is a global \$40+B market, annuity and services adds exponentially to this
- Gradual change is the norm in the B2B market...remember the paperless office of the 80s
- Print is still mission critical...paper for work processes, archival and external communication

2 MARKET EVOLUTION

- Maintain (or grow) the core business, while considering how the office will evolve
- 3D Platform: cloud, mobile, social, and big data
- Using technologies to better run the business and tap into the future computing landscape
- Innovation accelerators offer more hints for the future direction of office technology

3 OEM STRATEGIES

- Consider what supplemental technologies are now available from your OEM partners
- Display, video, security, BPO services, IT services, etc.
- Seek solutions and programs that tap into the office evolution
- Align with partners that are in sync with your vision and where you want your business to go



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Questions?



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