



The Shifting Office Technology Industry

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Agenda

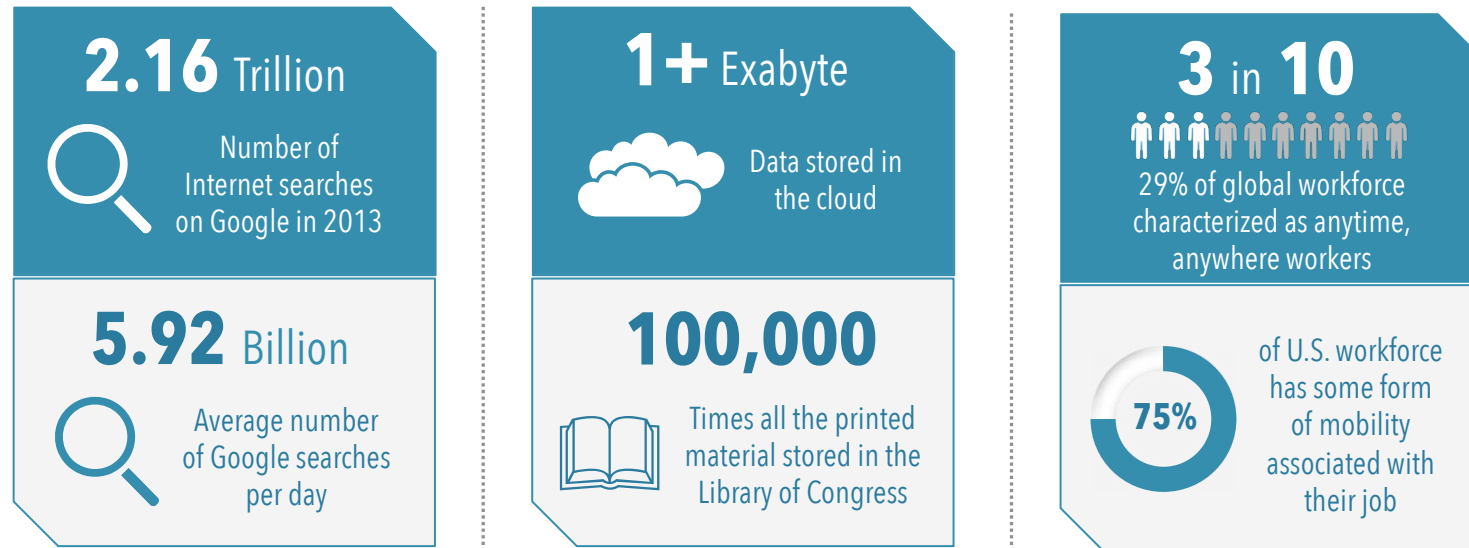
1 Mobility & the Changing Office Landscape

2 Document Solutions

3 Hardware and Technology Trends

4 Managed Print Services

Information Explosion & Workforce Dynamics



Sources: Forrester Research, Google, Nasuni

What is a mobile worker?

Old Definition

- Works remotely or works from home
- Travels a great deal as part of their job
- Does not have a traditional corporate office

New Reality

- Anyone utilizing mobile technology to access e-mail or other work-related content when not at their office
- Today, it is hard to find someone who does not fit the description of a mobile worker

U.S. Workforce

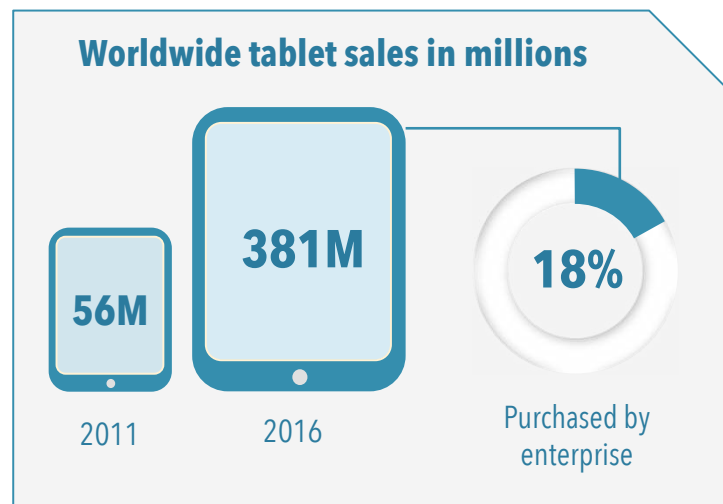


75%

Studies indicate that 75% of the U.S. workforce today has some form of mobility associated with their job.

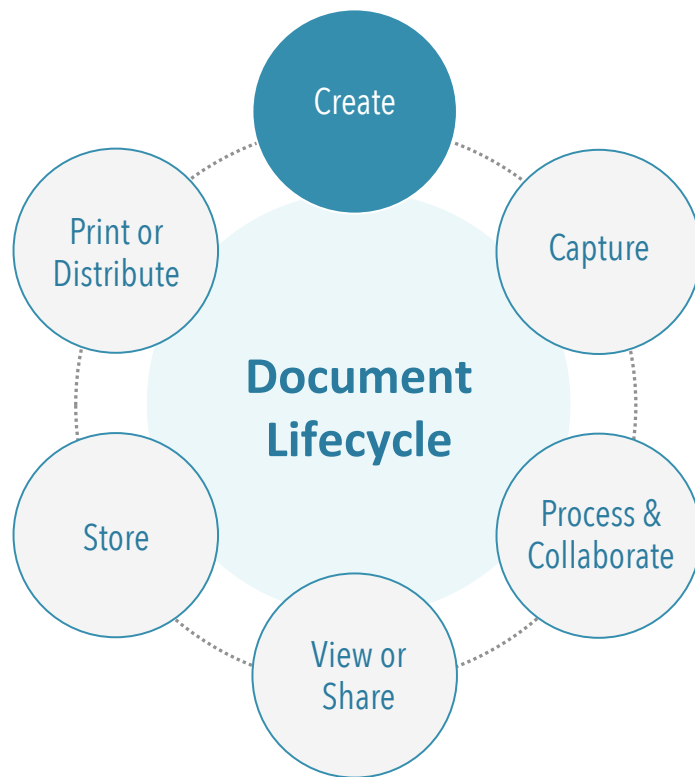


Mobility and Business



Sources: Forrester Research, Strategy Analytics

The Future of Print



Changing Office Workflow

- Basically every business function today can be performed electronically using a mobile device running a cloud-based solution.
- How much of their IT budget are new businesses investing in the ability to print documents?
- Is the future of print tied to existing document infrastructure?

Impact on Print

The old view

- Paperless office has been predicted for years but never quite materialized
- Paper is entrenched in many of today's business processes – difficult to circumvent
- Can we afford to bank on these notions?

Transition from print to display

- Inevitable and only going to increase
- Further adoption will lead to an increasingly negative impact on print
- Difficult to measure but likely greater and faster than many believe

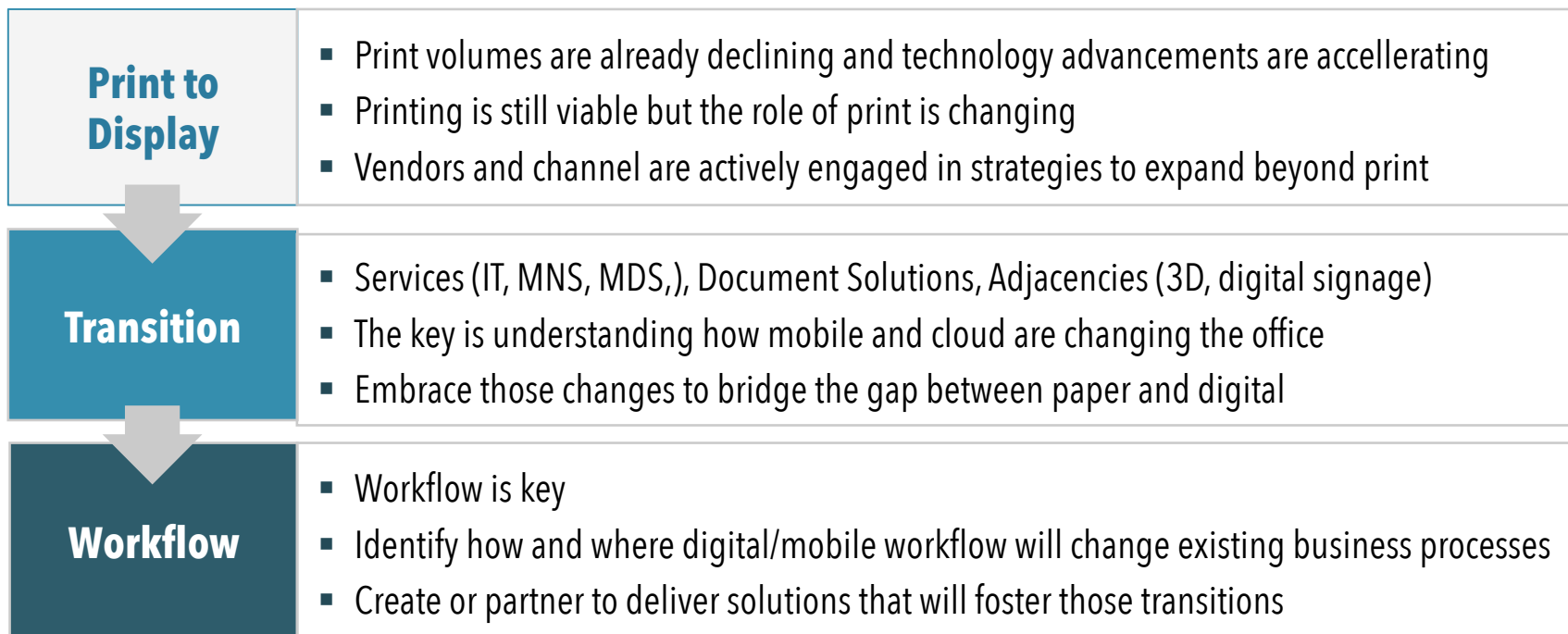
Is Mobile Print the Answer?

- Many position mobile print as key to incremental print growth
 - Premise: explosion of content fuels more pages even if print ratios decline
 - Dangerous assumption—think digital cameras and photo printing
- What do users want?
 - Most suggest a strong desire for the ability to print from their mobile device, but...
 - Few are actually printing more pages
- Barriers
 - Mobile print is still too complicated
 - Need more ubiquitous and seamless solutions

Mobile Print: A Checklist Item

- Technology advancements are improving the user experience
 - Server-based, public print, pull-print, embedded, etc.
 - Alliances such as Mopria will help drive standards
- Mobile print is important
 - Businesses and IT need secure solutions to mitigate risks associated with rogue applications
 - Users want the feature but show little desire to pay extra for the capability
- Not likely to drive incremental page volume
 - Becomes a required checklist item needed to compete

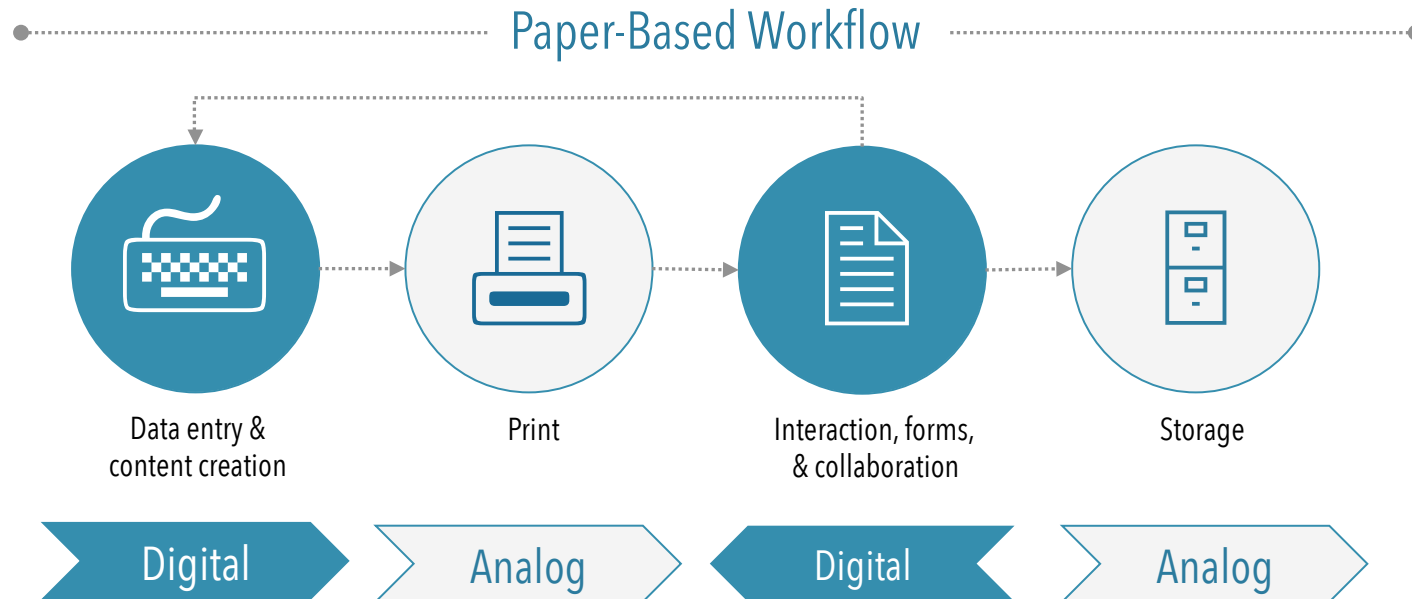
Market Response



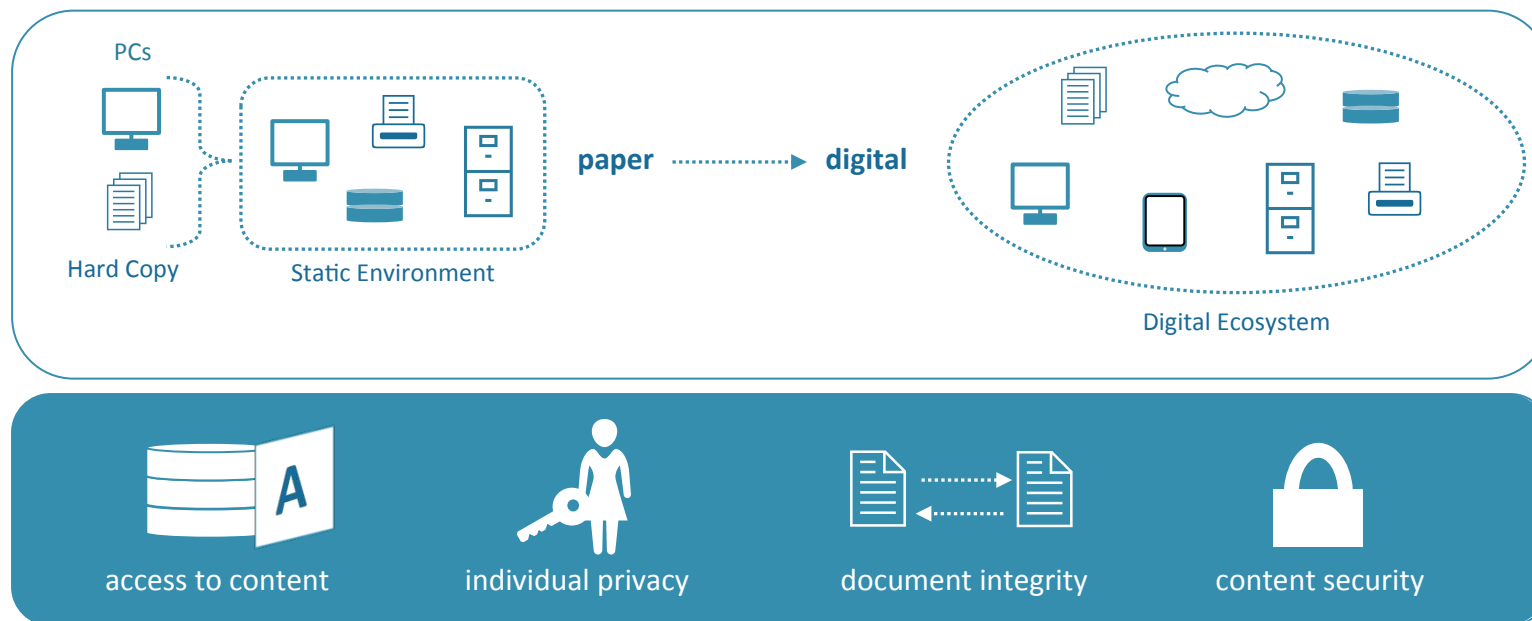
Document Solutions

Business Challenges

Focus moving beyond reducing costs to improving process efficiency

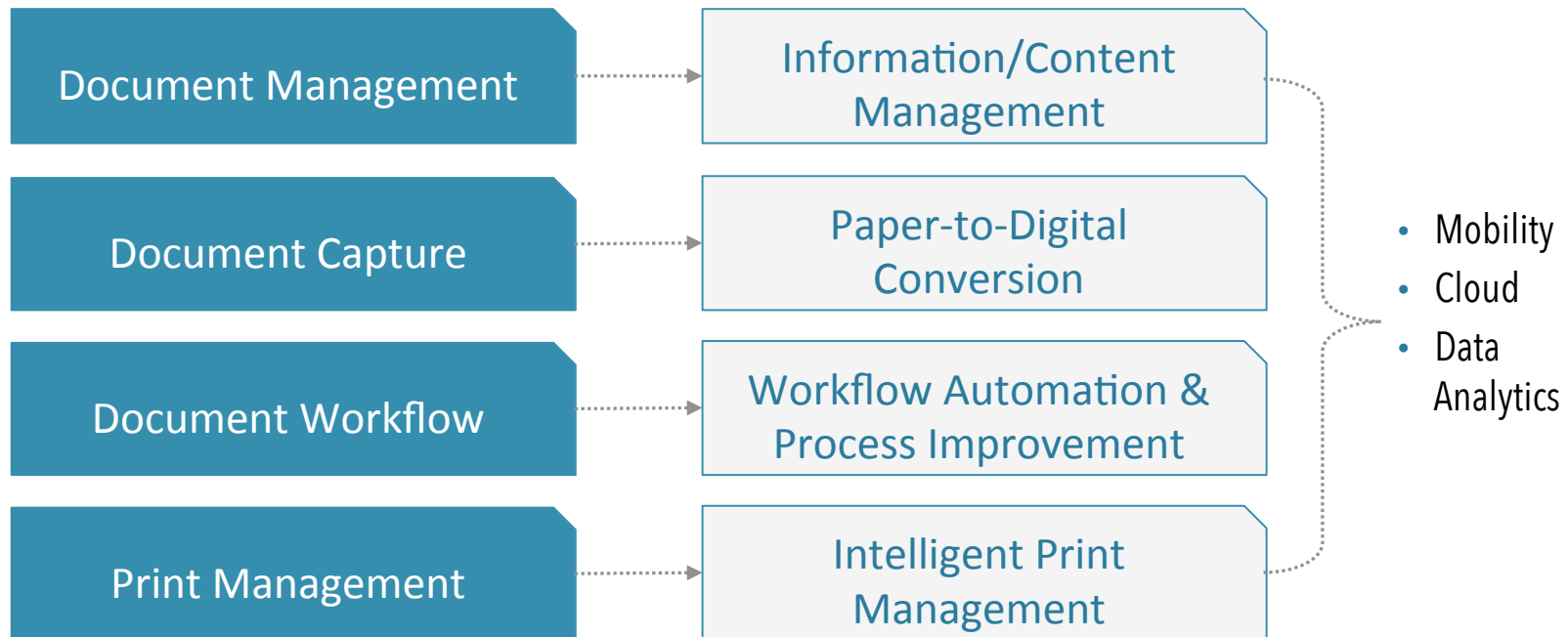


From Paper to Digital



- The ability to organize, access, and manipulate information for use in a wide variety of applications and form factors is crucial

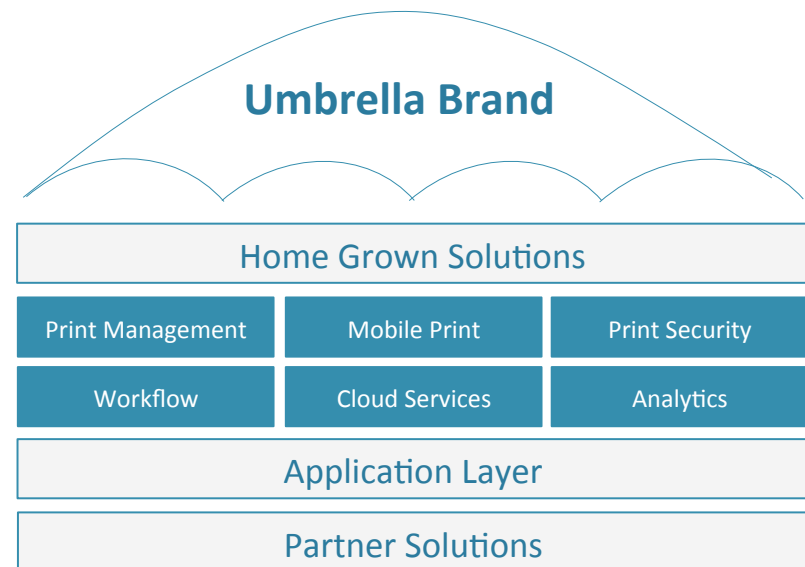
Vendor Solutions Strategies are Evolving



Creating a Solutions Ecosystem

Platform-enabled approach

- HP JetAdvantage
 - Branding strategy
 - New security solutions
- Xerox ConnectKey
 - Document analytics services
 - Personalized app builder
 - Workflow assessment services
 - Driving workflow automation



Solutions Outlook

Good growth in all areas

- Information management
- Paper-to-digital conversion and workflow automation
 - Mobile workflow very important (print, capture, storage, etc.)
 - Content security also key (integrated print and content management solutions)

Differentiation and channel enablement

- Cloud-based solutions and services (Saas)
- Vertical solutions and expertise
- MPS has become a centralized hub for integrating additional document solutions and services

Hardware & Technology Trends

Macro Trends: Hardware

- Continued shift from SF to MFP
- Growth in A4 offset by decline in A3
- Segment creep
 - Different from traditional speed creep
 - Vendors pushing product mix to higher priced segments to drive volumes and better margins
- Managed print services
 - Also fueling shift to A4 & MFP
 - Focus is on solutions enabled and platform approach
- Migration to color
 - Drive to churn the base is slowing down
 - Mono to color shift is peaking
 - Color growth has peaked in all segments
 - Focus moves to higher-end segments and higher volumes

Macro Trends: Print Volumes

- We see print volumes from A4-sized desktop units dropping annually for the foreseeable future
 - Print volumes from higher-end machines are growing
- MPS is not growing the market for A4-sized pages
 - Transactional pages declining at a steeper rate
- Cartridge usage is dropping faster than paper consumption as page yields grow on certain SKUs
 - More machines are capable of accommodating more than one cartridge (standard, high-cap, extra high-cap)
 - Consumers that print more use high-cap SKUs

Transition to A4 Continues

A4 Trends

- Began with convergence of copier and printer markets and continues with shift to MPS
- A4 is a strong value proposition for MPS
 - Low acquisition price (workgroup A4 MFPs)
 - Fewer interventions, reduced service requirements
 - Move devices closer to users
- Traditional copier vendors moving to A4-size products with mixed success

A3 Trends

- MPS uncovered under utilization and over capacity of A3
 - A3 needed for balanced deployment (A3 pages less than 5% of all pages printed)
 - Rapidly moving to centralized and departmental installations
- Channel requires A3 hardware to support business model
- A4 could reach beyond 70% of office page printer market by 2016

U.S. Office Page Printer Market

Unit shipments flat to declining

- Color not growing enough to sustain overall market
- Incumbents struggle to maintain position

Monochrome Market

- Unit shipments holding steady (not giving way to color expansion)
- Monochrome tail much longer than some had expected
- Benefiting from increased focus on print costs and price premium for color

Color Growth is Slowing

Office Color

- Transition to color negatively impacted by economic downturn
- Entry-level segments already peaked
- Highest growth coming in A4 mid- to high-end workgroup space
- Color pages have not come as quickly as hardware

Market Barriers

- High value pages have already shifted
- Color still considered too expensive for everyday office documents...but opportunity exists
- SMB market remains a prime target because there is less concern about abuse or misuse of color

The Value of Color

- Shift to MPS has slowed the growth for color
 - Color viewed as an opportunity for cost savings
 - Reducing color pages
 - Restricting or eliminating access to color devices
- Industry needs to work harder to position the value of color printing
 - Color is exploding in the office
 - HD screens, mobile devices, laptops, digital signage
 - Business users should be able to produce affordable prints that match the color quality of their displays

Color Operating Costs

Price Premium

- In many products and CPC contracts, color is still more than 4x the price of monochrome
- Page coverage has little impact on color costs

Current Focus

- Getting mono printing on color machines equivalent in cost to monochrome only devices
- Pushing color beyond high-value pages into everyday documents

Technology

- Technical advancements should be able to deliver on the promise of color
- Page-wide inkjet technology could lead the way for broader adoption of color in the office

Ink in the Office: The Future of Office Color?

Why Ink in the Office?

Ink is cheaper to manufacture than toner

- Less complex writing system
- Fewer moving parts
- Fewer break points and serviceable items

Media does not touch the imaging system

- Supports a broader range of substrates compared with laser

Attributes for the optimum office color device

- Lower hardware costs compared with laser
- Lower color printing costs – tiered color pricing
- Fewer service requirements
- Lower energy consumption
- Less waste

The Future of Office Color

Can Ink Support the Demands of the Office?

Inadequate comparisons

- Office users comparing to consumer-class inkjet devices
- Must be implemented in a platform designed for the office
- Xerox solid ink-based products never suffered from bias

Print quality concerns

- Plain paper printing without smudging or smearing

Overcoming the bias

- Inkjet currently used on some of the fastest production-class printers in the world
- Cranking out more pages in a day than an office printer would see in its lifetime
- Page-wide array technology: As more page-wide inkjet devices designed for the office are introduced, the bias should be easily overcome

Page-Wide Product Introductions



Lomond Evojet Office Pro 310

- First Memjet-powered MFP
- 60 ppm color printing
- 20 ppm ADF



HP Officejet Pro X Series

- First HP A4-size, page-wide desktop inkjet machine
- 70 ppm color printing
- Half the color printing cost of comparable color laser



Xerox ColorQube 8700/8900

- Solid ink-based, A4-size color MFP
- Up to 44 ppm color printing



Brother HL-S7000DN

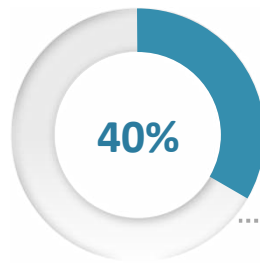
- First Brother machine based on Linehead page-wide array
- Monochrome only inkjet printer
- Up to 100 ppm in Simplex mode



HP Officejet Enterprise Color

- First page-wide device from HP aimed at Enterprise segment
- Up to 70 ppm
- 4.4 cents color cpp
- 1.1 cents mono cpp

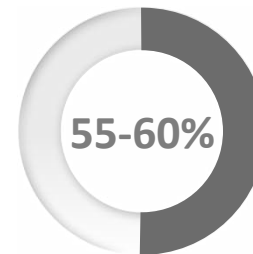
Opportunity for Office Ink



Including SOHO segment: Business inkjet already accounts for 40% of the entire office printing market



Including SOHO segment: By 2016, business inkjet is expected to comprise close to 60% of the office market—growth to come from mid-level workgroup segment



Managed Print Services

Continued Transition to Services

MPS Today

- The intense focus on the cost of print has helped fuel the ongoing adoption of managed print services (MPS)
- MPS continues to grow even though the overall market is contracting
- Moving down market from enterprise to SMB

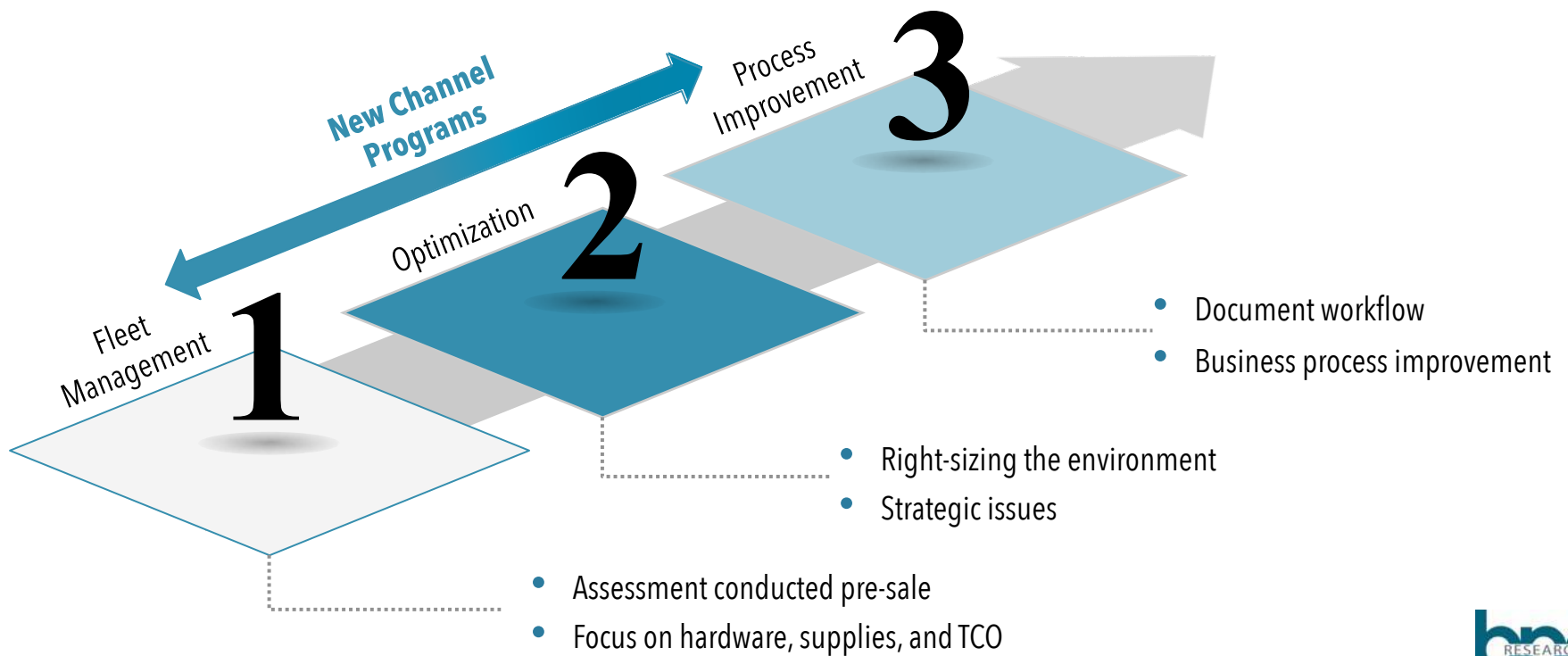
Competitive Landscape

- Many OEMs and providers using MPS as a "land grab" approach to steal pages and drive the MIF
- The value proposition of MPS today is all around reducing costs
- Creating a challenging market where providers are pushing CPP rates lower and competing away the profits

Commoditization of MPS

- Land grab approach creates problems
 - Too many providers and not enough pages to go around
 - Stealing pages from competitors does not grow the market
 - Competing on cost is a short-term, vulnerable position
- MPS is already commoditized at the low end
 - Basic fleet management services
 - Up-front assessments completed with little regard to impact on productivity
- SMB is now the prime target for OEMs
 - Requires higher client value and channel engagement

The MPS Continuum



Enabling the Channel

- Simplified, packaged MPS Services
- Turnkey partner solutions
 - Sales tools
 - Marketing programs
 - Incentives
- Subscription Services
 - HP Instant Ink Professional
 - Qualified printer purchase
 - Service
 - Monthly billing plans: \$19, \$39, \$59
 - Xerox PageConnect
 - Small office savings plan
 - "Free" printer and on-site service
 - Monthly billing plans: \$59, \$99, \$109, \$149

HP Instant Ink Professional

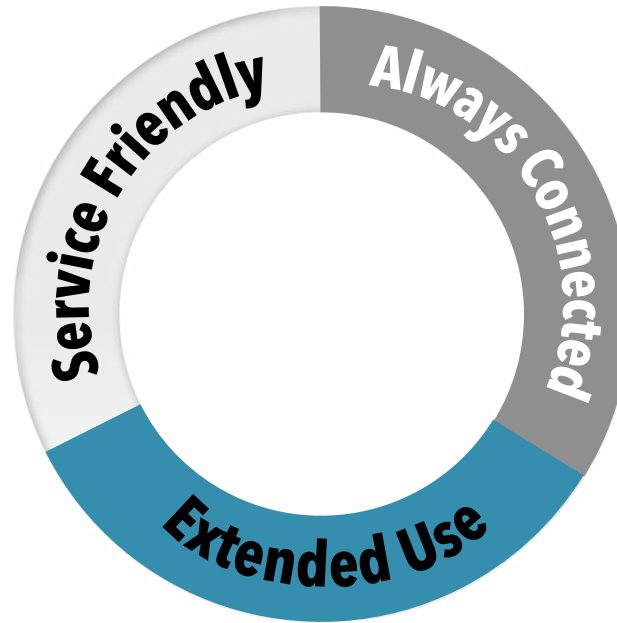


Hardware Impact: Near Term

MPS-ready hardware

- Universal Print Drivers
- Remote diagnostics
- Self-healing technology
- Remote installation & config

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- Remote application and firmware upgrade
 - Embedded security
 - Common and sophisticated user interface



- Cloud & Mobile Integration
- Open MIB and APIs for third-party software
- Data analytics
- Embedded GPS

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- Automated supplies replacement and fulfillment
 - High-yield supplies
 - High-capacity paper handling

Hardware Impact: Long Term

Products become service delivery vehicles

- Services turn products into platforms
 - The need to deliver complex services and capabilities efficiently will drive hardware changes
 - MFP becomes the connected hub
 - Consumerized user experience
 - Products could become de-featured to support a services ecosystem that fosters add-ons and continual improvements
 - Value is in the applications and services and not in the hardware (think iPad)

**Samsung
ProXpress M4583FX**



Thank You

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