

Hot Off the Press

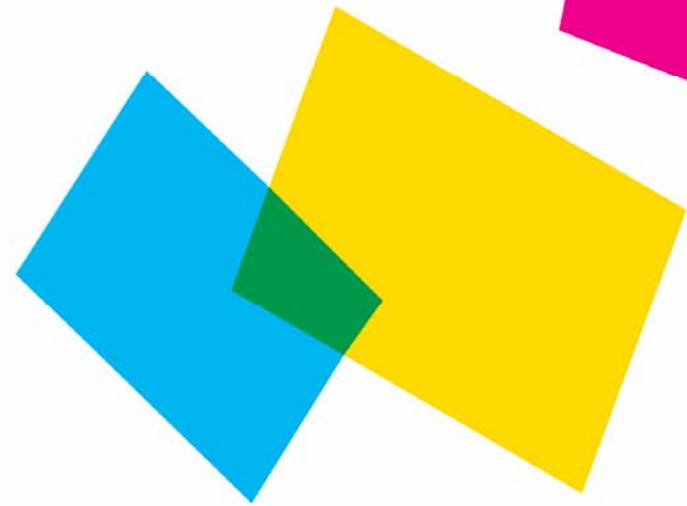
Why Print Still Works in Learning

October 2, 2007

Presenter:
Charlie Corr, VP Corporate Strategy

Agenda

- » Why **print** has enduring value in learning
- » A review of **new technologies** that enable you to improve efficiency and lower your total print costs
- » **Best practices** in the management, printing and distribution of printed materials



The Value of Print in Learning

Is Print Effective?

» Why do we care?

- "Reading is the means by which the world does a large part of its work.... The slightest improvement either in the page or in the method of reading means a great service to the human race" (Huey, 1908)

» Two schools of thought

- Paper is far superior and will never be replaced by screens
- Viewing is superior to print and we will soon be paperless

» A quick review of the evidence

- A number of studies to judge the effectiveness of print vs. screen
- This is a hotly contested subject

Evidence for the Efficiency of Print

» **Locations/situations where it would currently not be practical to view electronic text:**

- **Reading a newspaper on the beach or near any water**
- **Reading without access to power**
- **Where it is prohibited**
 - Take off and landing

Evidence for the Efficiency of Print

» Paper is an efficient carrier of information

- An intimacy of interaction
- Millions of printed documents currently exist and aren't going away for many years
- Paper is low cost and almost universally available
- Paper lasts with limited backward compatibility issues

Evidence for the Efficiency of Print

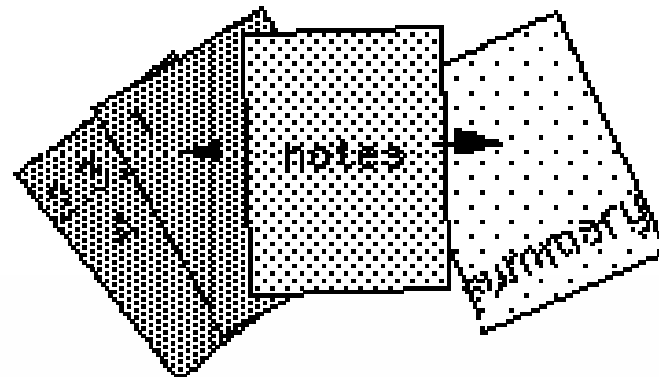
- » Reading from paper is 20% to 30% faster than reading from a screen
 - Almost beyond dispute
- » Viewing results in lower accuracy for tasks such as proofreading
- » Viewing causes more eye fatigue
 - Dependent upon amount of time spent reading

Evidence for the Efficiency of Print

» Comprehension

- This is the most contentious area
- The main advantage of paper is the ability to read and annotate, to navigate quickly and to facilitate spatial layout
- Results in a deeper understanding of text, a better sense of structure and making it easier to interleave reading and writing

» It combines tactile and visual learning



Evidence for the Efficiency of Print

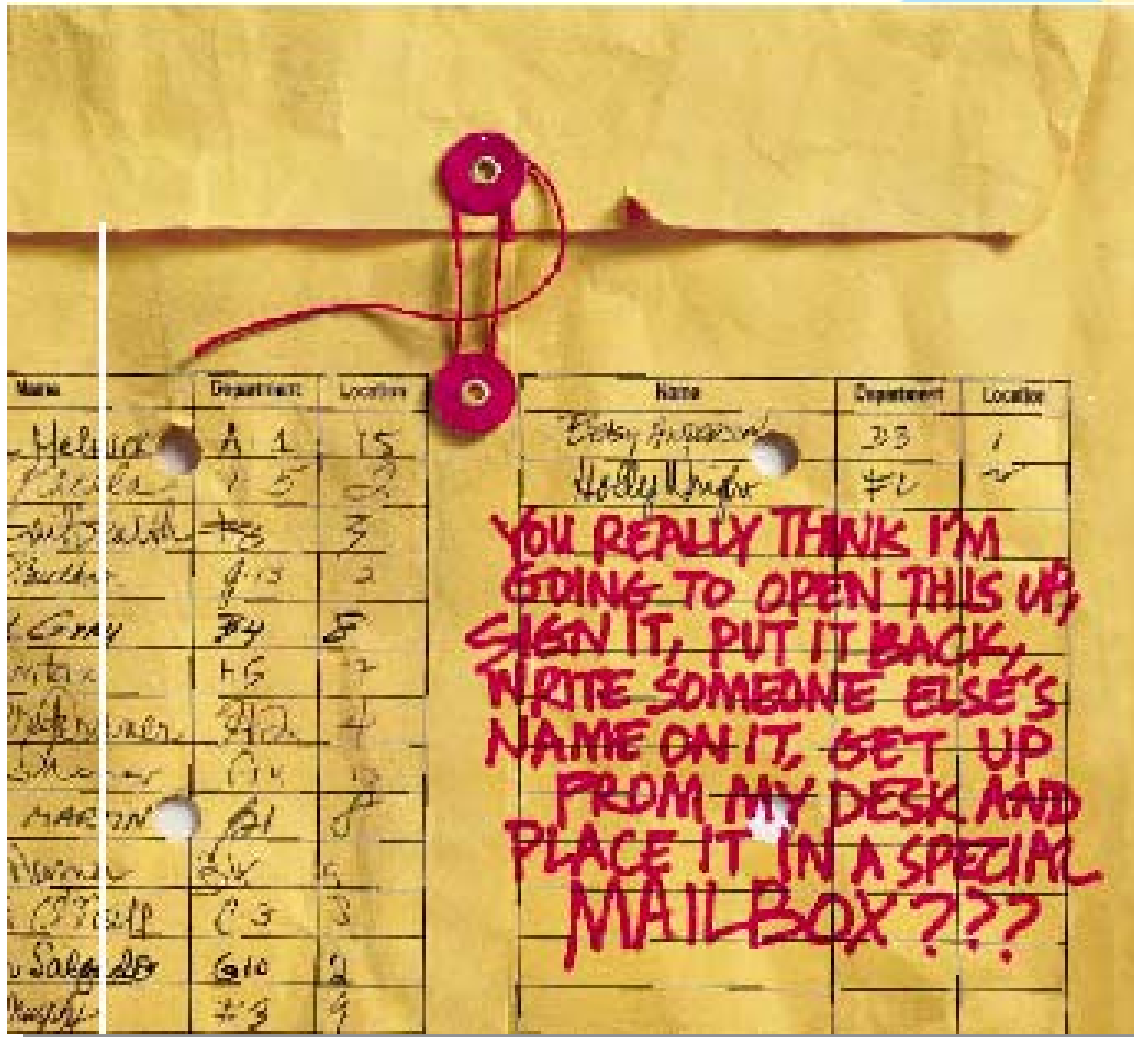
» An end-user preference for print

- Related to flexibility, culture, ease of use
- This preference increases with high quality typography and print
 - It is not age dependent

Evidence for Viewing

- » It is easier to navigate on-line text
 - Somewhat offset by structure of printed material
- » It is easier to cut and paste on-line text
- » It more easily coexists with other media
- » Technology will continue to improve
- » It is less expensive to publish

Paper Has Limitations



Artwork courtesy of Adobe Systems

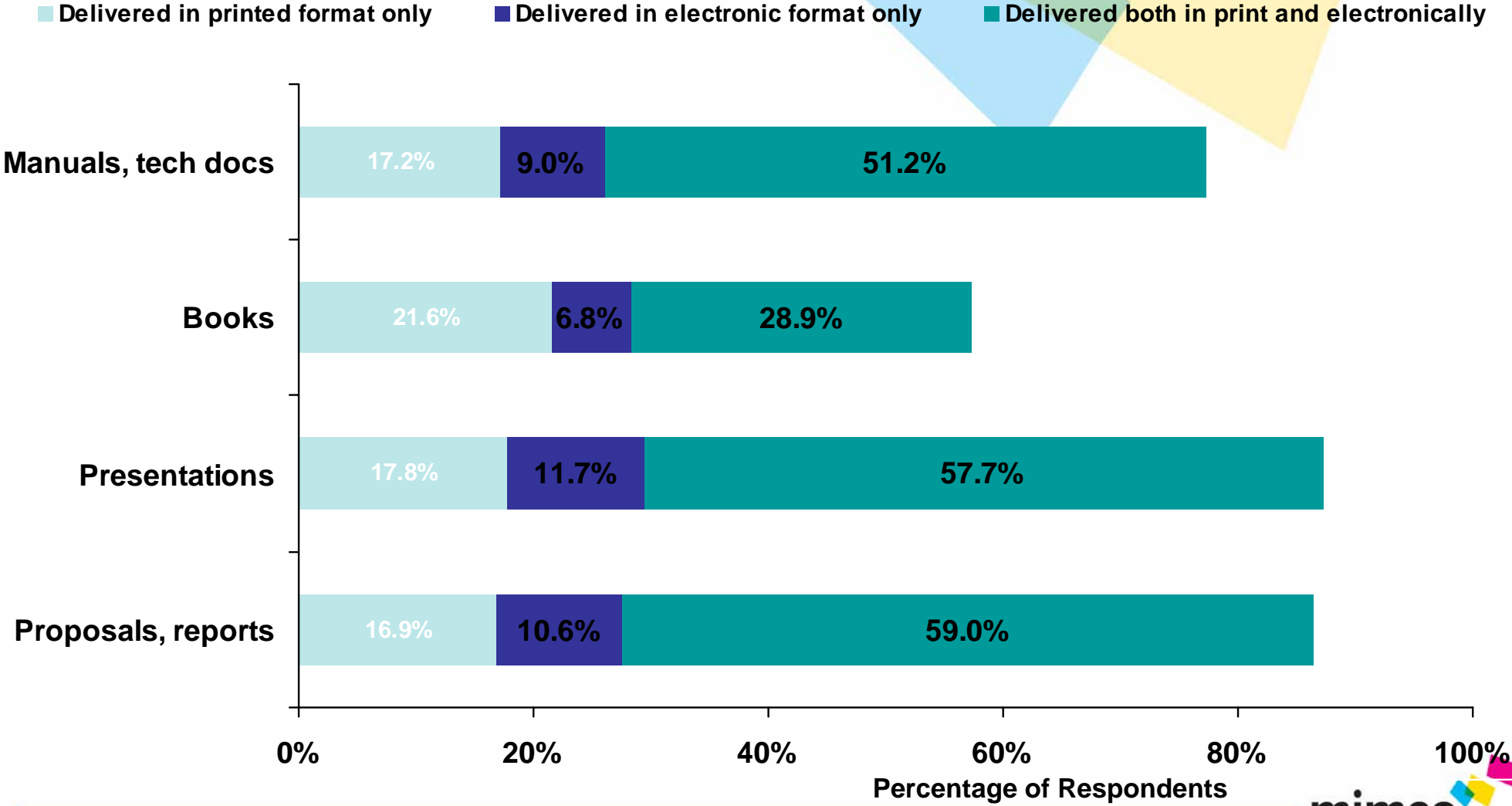


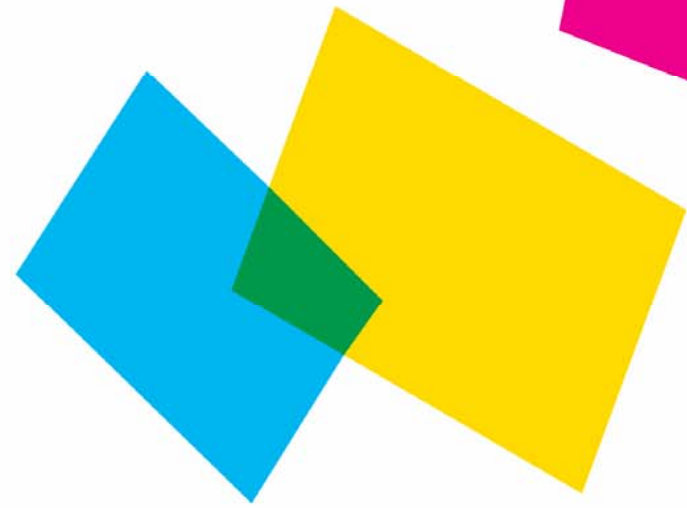
The Verdict

» It isn't one or the other, the reality is that **both** have enduring value and should be leveraged to facilitate learning

Document Delivery Format

Documents can be delivered as printed documents, electronic files, or both. For each of the following application areas, how are documents delivered to end-users?





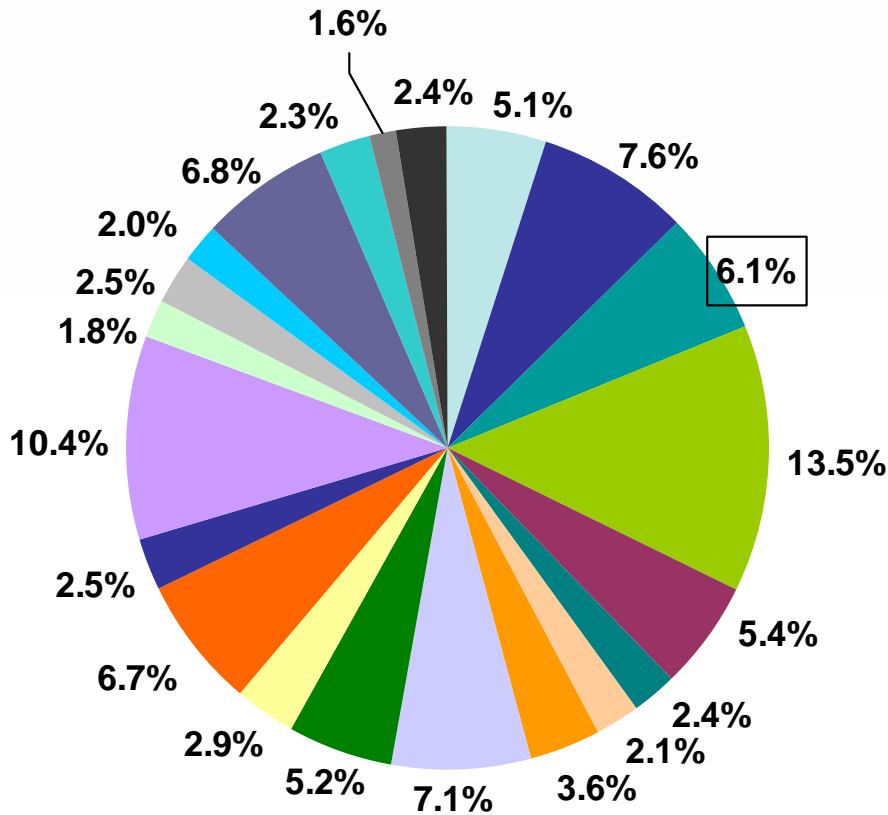
Improving your Document ROI

Print is a High Cost for Large Enterprises

- » InfoTrends reported that large organizations (those with over 500 employees) account for 59% of the total estimated print spend or \$68.07 billion in 2005
 - Organizations with over 10,000 employees account for an estimated 31.8% of the total or \$36.71 billion
- » Document intensive industries report spending 4.2% of revenue/budget on production print

Percentage of Print Spending by Area

Approximately what percentage of your company's internal and external print spending do each of the following areas account for?



- Clinical area
- Corporate communications
- Corporate education
- Customer service
- Creative services
- Engineering or research and development
- Facilities engineering/facilities management
- Field service/field operations
- Finance or accounting
- Human resources
- IT/IS)
- Legal
- Manufacturing
- Marketing
- Materials management
- Merchandising
- Purchasing or procurement
- Sales
- Retail operations
- Travel planning
- Other

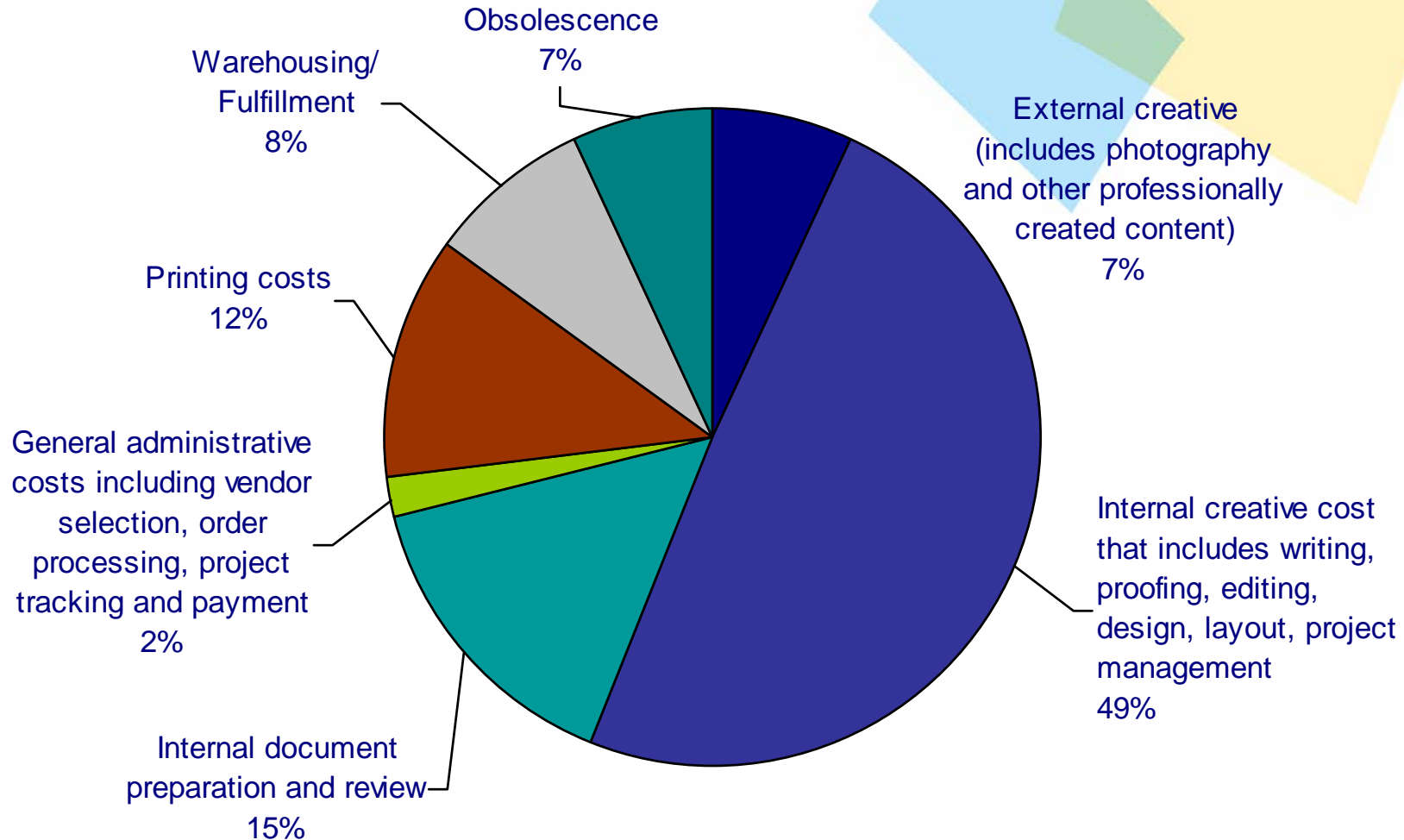
N= 570 Print Buyers

Print Spend Matters

- » On average for every \$1 organizations spend on print they spend another \$6 on related functions*
- » An example:
 - **Manual**
 - 200 pages
 - 8.5"x11" page size
 - Text prints in black, prints two-sided
 - 20# white paper for text
 - Cover prints in full color on 65# white cover stock, blank back cover
 - Spiral bound, 3 hole drilled

* InfoTrends: *The Cost of Business Communication: A Look at the Business Document Lifecycle*

Average Manual Costs



Technologies that Improve Printed Communication

» Desktop Software

- Tied to the PC

» The Internet

» Digital Printing

- Can print what you need, when you need it and even personalize it

» “Super-efficient” Workflow

- Tied to JDF and proprietary software

» Overnight Delivery

» Digital Photography

Technologies that Improve Printed Communication

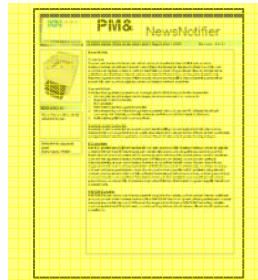
» Document Builders

» Document Repositories

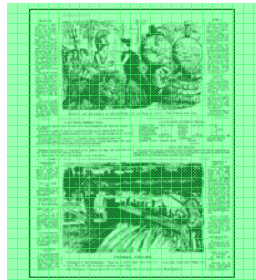
» Web 2.0

- Enabling new levels of collaboration
- Allowing the “mashing” of professional and user-generated content

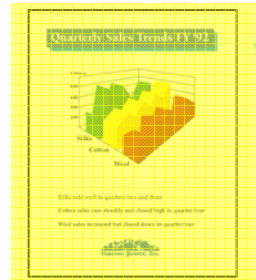
Document Builders from Multi-source input



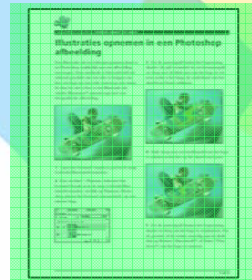
Word
file



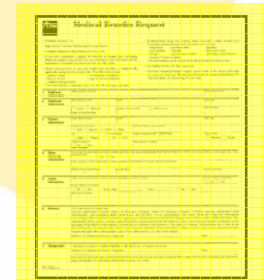
PDF
file



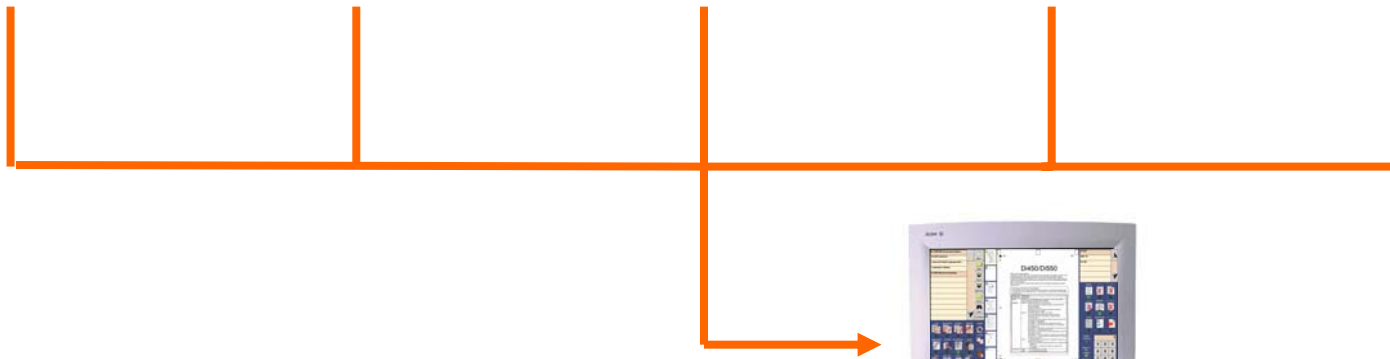
Excel
file



Quark
file



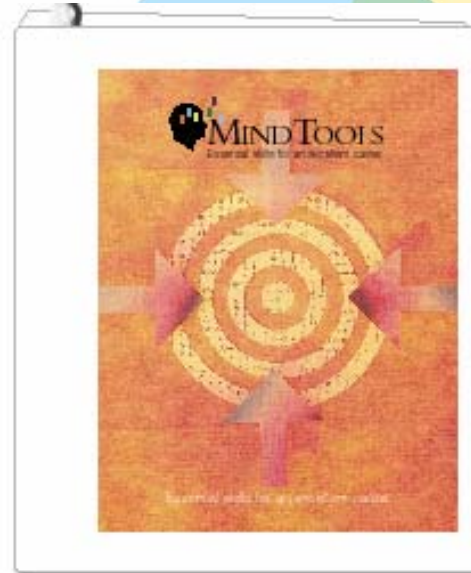
InDesign
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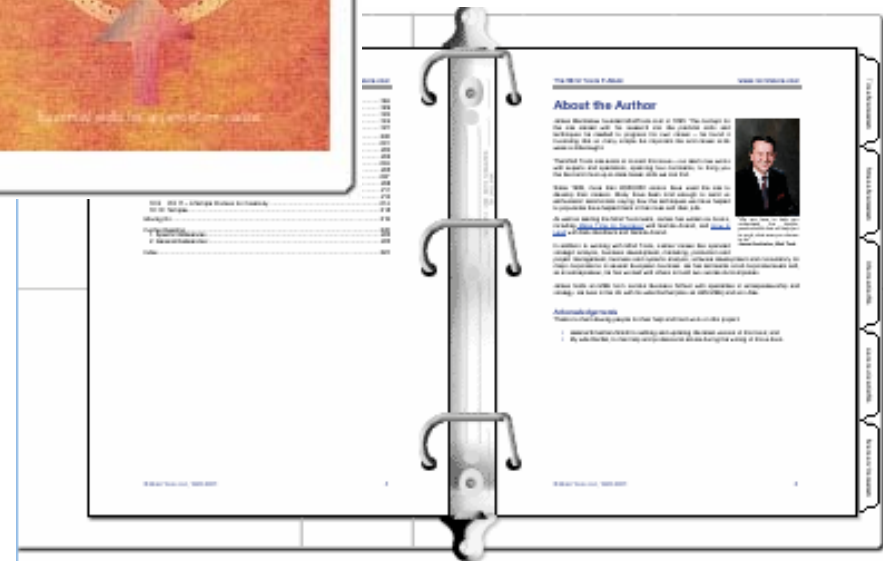
Create the Document!



Spiral Bound



Notebook



Improving Document Effectiveness

» **More personalized/relevant**

» **More impactful/memorable**

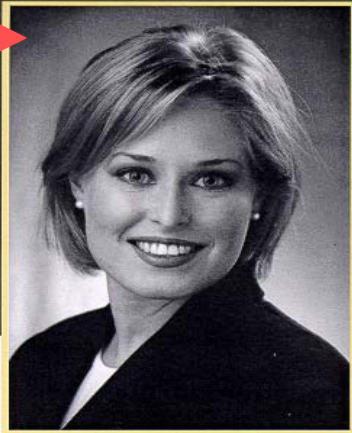
- Enabled by digital photography

» **Quality design and print**

- 40% of all documents currently printed in black and white would benefit from being printed in color

Improving Document Effectiveness with Personalization

Photo



"I can help you explore 3 or 4 different retirement options before choosing the right one."

Text

"Please accept my invitation to try our exclusive new Scotia Lifetime Financial Guide – at no cost or obligation."

Lynette Laycock
Personal Investment Manager
Scotiabank
Vaughan CBC, Woodbridge
(416) 866-3975
llaycock@scotiabank.ca

"Just complete and return this card in the enclosed postage-paid envelope. I will contact you to set up a convenient appointment as soon as I receive your reply."

Thank you.

I 23456

Signature

Logo



Personalized info

- YES, I would like to explore a number of different retirement options to see which one makes the most sense before converting my RRSPs.
- Perhaps. This isn't a good time for me. But please keep me informed about Scotiabank services that can help me build a more secure retirement.

My phone number is: () _____
Best time to call is: _____ a.m. _____ p.m.

Is there someone you would like to bring to your Scotia Lifetime Financial Guide appointment? Yes No

Their name _____ (Please make any name or address corrections on reverse side)
123456 I 23456

Mr. John Sample
123 Any Street
City, Province
A1B 2C3

Improving Document Effectiveness with Color

Increase attention span and recall

Color emphasizes important points and increases retention 78%



Add persuasiveness

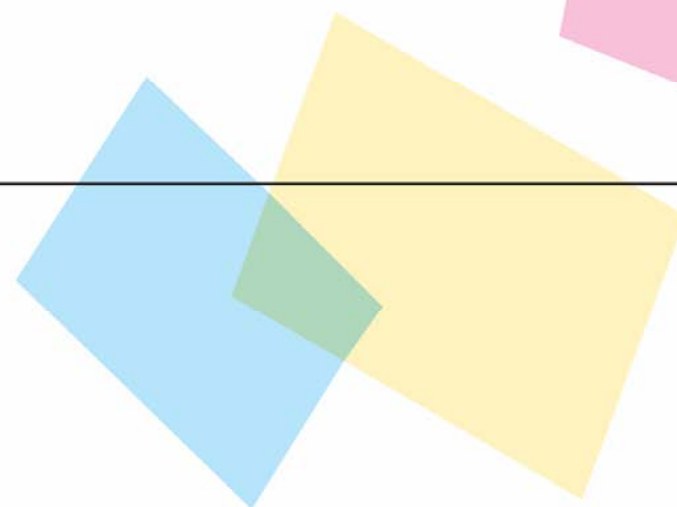
Color motivates people to take action by 85%



Reduce errors in understanding

Color helps messages be understood by 78%





Best Practices

A Fragmented Printing Industry

» 87,000 establishments in the US

- Includes general commercial printers, copy center, digital printers, quick printers, in-plant printers, direct mail companies, pre-press services and forms companies

» RR Donnelley has the largest share of the \$115 billion document printing market at 4%

- The 400th largest printer in the annual *Printing Impressions* survey had annual revenue of \$6.5 million in 2006

A Fragmented Print Industry

» No full service providers

- Over 60 discrete products
- On average 20 distinct departments generating print, none account for over 13.5% of total spending
- Print providers are defined by expertise, equipment and workflow
 - While many claim to be “full-service” in an EDSF Survey last year when asked about 31 specific services, no printer offered them all*

* Electronic Document Systems Foundation (EDSF): Supplier and Service Provider
Priorities: 2006 Survey Results

Industry Transformation

- » **The cumulative impact of technology results in a “transformation” of the industry**
 - **Other industries that have been transformed are the auto industry (twice, first Ford then Toyota) and the retail industry (Wal-Mart)**
 - **Industries tend to contract by half over about a decade***
- » **Moving from a craft base to a service and technology industry**

“Industry Transformation,” Harvard Business School, Michael Porter and Jan Rivkin

Only the “Super-Efficient” Survive

» A “super-efficient” organization means:

- Internal processes function with rare interruptions and few errors
- Little data is rekeyed
- Units and functional areas collaborate
- The organization is fast and cost effective
- The organization interacts with its stakeholders by sharing processes across the supply chain

Only the “Super-Efficient” Survive

» A “super-efficient” organization means:

- Procurement processes are coordinated with suppliers and the suppliers order fulfillment process
- Common data repositories eliminate duplication of effort, time and cost while providing higher levels of service
- The web is used as a common business tool

Only the “Super-Efficient” Survive

» Achieving “super-efficiency” will allow a print provider to meet evolving end-user requirements

- More complex documents
- Shorter run lengths
- Faster turnaround times

Best Practices – “Smart Sourcing”

- » **Service agreements with print providers who can meet your specific requirements**
 - **Similar to efficient manufacturing**
- » **Sole sourcing results in significant sub-contracting and additional cost that can be avoided if you purchase enough of a given product or service**

Best Practices – “Smart Sourcing”

- » **“Smart Sourcing” results in having vendors who meet your requirements for quality, turnaround time and value**
- **Allows the print provider to provide what you need**

Best Practices – Total Cost

» Understand the total cost of documents

- **Knowledge workers are expensive**
 - Average cost of \$.53 per minute*
 - The average cost of a document produced in the workgroup is ~\$.52 a page*

- IDC, The Hidden Costs of Information Work
- **ALL Associates, EDAM

Best Practices – Total Cost

- » Time is our most precious resource
- » Staff for average not peak
 - Smart Source peak

Best Practices – Leverage Technology

- » **Working longer and harder has limits**
- » **The benefit of technological innovation is to allow us to do things we couldn't do before and to be more productive without spending more time or energy**

» Our Mission

- To Delight our Customers with the easiest, fastest and most reliable way to print, manage and distribute documents

» History and Locations

- Founded in 1998
- Corporate Headquarters in New York City; Production Facility in Memphis, TN, development facility in China

Memphis Production and Distribution Facility

- » World's largest (140,000 sq. ft.) and most automated facility dedicated to digital production and distribution
- » Located next to the FedEx hub in Memphis, TN
- » Produced 2.5 million bound documents in 2006



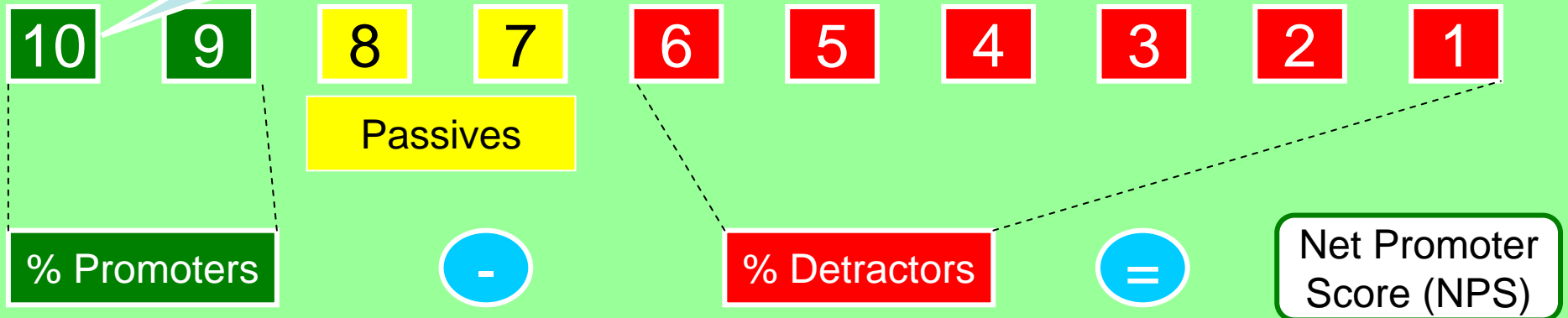
Mimeo's Customer Satisfaction (NPS) at Top of US List

How the Net Promoter Score (NPS) Works:

Question: "On a scale of 1-10, how likely is it that you would recommend our company to a close friend or colleague?"

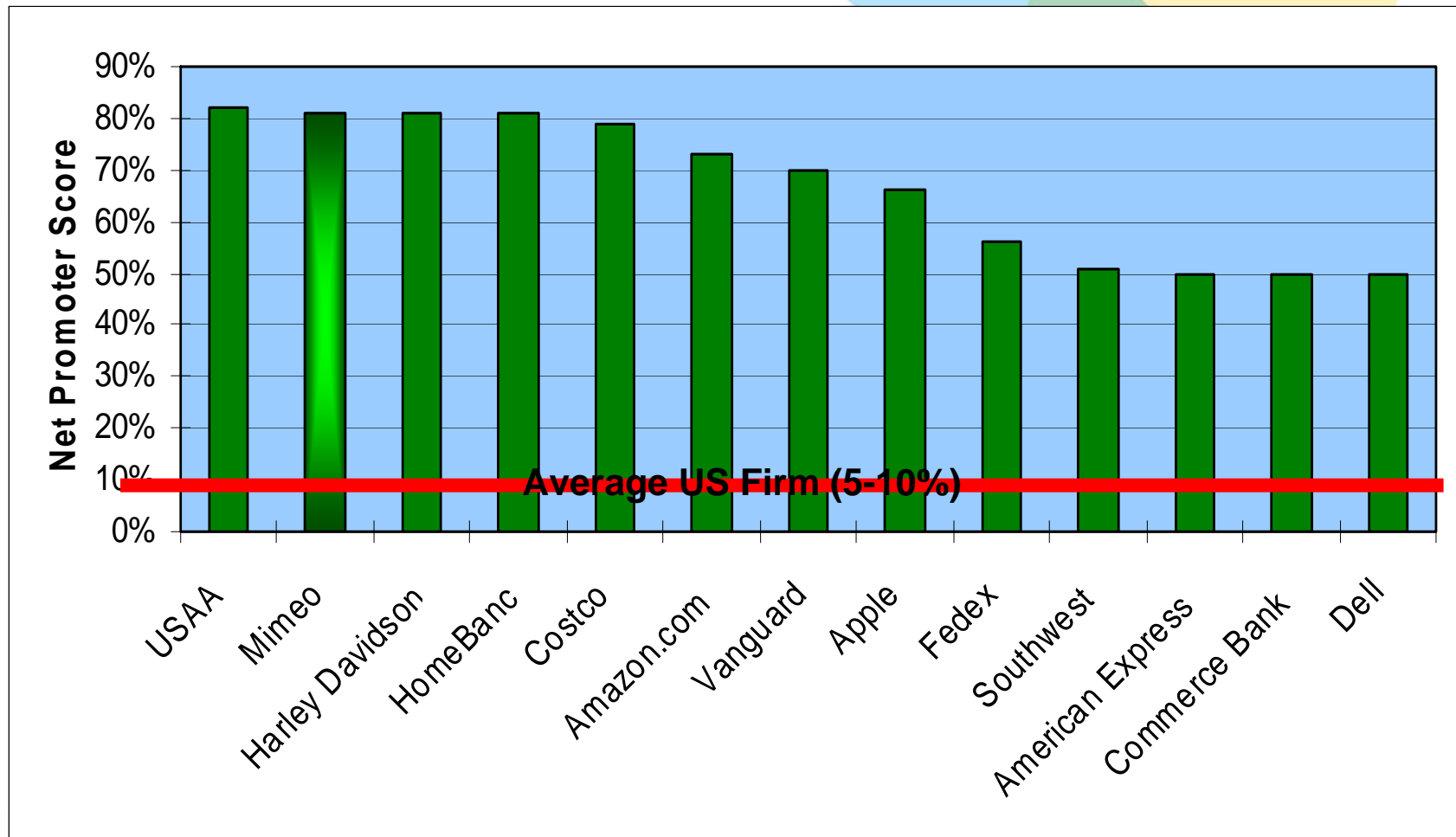
Focus on emotional bonding

Focus on real enthusiasm



NPS works because it requires putting personal reputation on the line

Mimeo NPS Score Amongst Highest in US



Data based on Bain or Satmetrix surveys—except Mimeo which is internally reported

Why Mimeo?

- » A quality experience by design is far more compelling than by chance
- » Leveraging technology to your benefit

Technological Innovation	Mimeo Advantage
Desktop software	Leveraging user generated content, saving time & money
Internet	Send jobs from desktop
Mimeo printer software	Documents printed as you see them on your monitor, compressed and sent securely
Digital printing	A print factory that produces near zero defects, print what you need
Overnight delivery	Receive jobs whenever and wherever you need them

Sources

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- »» **Muter, Paul (1996), Interface Design and Optimization of Reading of Continuous Text, University of Toronto**
- »» **O'Hara, Kenton & Sellen, Abigail (1997), A Comparison of Reading Paper and On-Line Documents, EuroPARC**



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