The true costs of building a
digital color business

How much will you spend on networking, software, servers and support?

Digital color printing can be profitable, but success in this market requires more than making color prints faster and cheaper than before. The high-growth digital color providers offer value-added services, including making their print shop more accessible via Internet interfaces, offering simple software tools and templates for the novice user, providing digital-asset and content management, and integrating into their clients' customer-relationship-management solutions with variable-data support.

Real-world business models

Depending on the printer's target market and application mix, the infrastructure investment can be substantially greater than the original investment in digital color equipment. Printers moving into digital need to consider the true cost of successful market participation, not just equipment and consumables costs.

Between January and July 2003, the Printing Industry Center at RIT (Rochester, NY) surveyed 40 users of digital color technology to assess the investment required to develop a successful business model. Survey responses came from owners and managers of companies of various sizes, who had been involved in the digital color market for various lengths of time.

The survey explored:
- Level of satisfaction with their digital color investment
- Print applications provided to clients
- Value-added services offered to differentiate print solutions
- Staffing levels and skills required to optimize the digital color investment

Gerry Castaneda operates an HP 3000 press at Info-Comm, a division of the Wagner Cos. (Chicago). See www.infocommprint.com.

- Technology—printers, RIPs, software and proprietary solutions.

Four clear market segments and investment levels emerged from the research:
1. Quick printers and in-plant printers
2. Commercial print/supply-chain management
3. Customized Internet on-demand services
4. Fully customized communications.

The level of investment was directly correlated with the printer's target market and application mix, and the majority of respondents were satisfied with their overall digital color business results within their chosen market segment.

Quick printers: limited local investments

Quick printers acquiring digital color equipment have focused on the delivery of cheaper, faster and more colorful documents through retail storefronts. The application mix—primarily business cards, stationery, presentations, proposals, and short run, on-demand manuals and brochures—requires a limited investment in infrastructure at the local franchise level. In this retail-centric market, most quick printers have digital color copiers ranging from 12 ppm to 60 ppm and the associ-

Digital market segmentation

Investment level →

Quick print/ in-plant print shops

Commercial print/ supply-chain management

Customized Internet on-demand services

Fully customized communications

Market focus →

ated RIP technology. The quick copy center will also typically provide an array of finishing capabilities not otherwise accessible to the customer.

The average franchisee does not have any substantial IT staff support. Based on interviews with Sir Speedy (Mission Viejo, CA), Kinko's (now owned by FedEx) (Dallas) and Triangle Repro-center (Princeton, NJ), most local shops spend about $0.10 on infrastructure for every dollar spent on digital color printing equipment. The corporate headquarters makes the technology infrastructure investments that set the stage for what can be provided locally. The local manager generally cannot afford to evolve to a more service-centric, digitally enabled market model.

Franchise production hubs

Most quick printers don't produce every part of every product they sell. Much of it, from thermography to pocket folders, is brokered.

Organizations like Signal Graphics, owned by Sampa Corp. (Englewood, CO), have made a decision to minimize the retail-storefront investment and instead set up production hubs to aggregate manufacturing capacity. Signal Graphics franchisees emphasize customer acquisition and retention rather than the ability to manufacture all things for all people. Most Signal Graphics Business Resource Centers have digital black-and-white copiers, a digital color copier, computers and bindery equipment; more expensive offset printing equipment is housed at a Denver hub. The company plans to add packaging and shipping, as well as other services, to create a profitable fulfillment center.

Sir Speedy, for its part, has extended its customer reach with SirSpeedy.com, which averages more than 1.5 million hits per month. The website offers online proofing, credit-card processing and online reporting for major accounts. Sir Speedy also released a new e-commerce solution, MyDocs, which accounted for more than 7,000 new customers in 2002. MyDocs lets users store frequently ordered documents in a secure online catalog for fast ordering. Business cards, stationery, presentations, manuals and brochures are available electronically 24 hours a day, seven days a week, using a login and password.

In-plant: limited variable-data demand

The in-plant market is seeing demand for short-run color climb. Emphasis is on quality, speed, price and convenience. Initial technology investments include digital color copiers, primarily supplied by Canon and Xerox. Key software services include electronic file transfer; ordering, estimating and inventory management; proofing; and design, imposition, trapping and preflighting.

According to a 2003 survey conducted by *In-Plant Graphics* magazine, out of 273 locations, only 12.5 percent of respondents offered Internet

services and 10.5 percent handled data center/IT printing with variable data.

Typical in-plants see variable-data printing as difficult to implement and view it as having far less market demand than initially anticipated. This equates to a limited investment in infrastructure, with the primary emphasis on file-transfer support for end users, digital color copiers and RIP technology.

Digital storefronts

Because of its need to service multiple end users, in-plant shops typically invest approximately $0.30 in infrastructure for every dollar spent on digital color equipment. This is starting to change, however. Georgia Perimeter College (Clarkston, GA) recently added an HP Indigo 1000, as did Duke University (Durham, NC). Louisiana State University (Baton Rouge) and the World Bank (Washington, DC) have added NexPress 2100 units to their equipment portfolio. Their goal with these investments: to stop having to print color pieces offset and then assembling them into a kit after they are ordered. In-plants want to start building the kits electronically and printing them digitally, to save on outsourcing and labor costs. They are beginning to build "digital storefronts" where customers can request sales collateral online and have it personalized and printed at the time of order.

Commercial printers and the supply-chain connection

Traditional commercial printers often initially focus their digital-color investment on short-run, quick-turnaround, on-demand jobs. They emphasize delivery of "virtual litho" quality with digital color technology. Simple replication of the same image is cost-effective for runs of up to 500 A3 sheets (1,000 product sheets, 3,000 postcards, etc.).

Inline collation and two-sided printing allows these printers to run complete booklets or binders of multiple pages as fully collated "sets," delivered off the press ready for trimming and finishing. Many companies in this segment have added online access to marketing support materials and a document database for repetitive print-on-demand capability. The objective is to become an integral part of the customer's supply chain for marketing materials.

Firms like Great Lakes Cos. (Cleveland) and LaVigne Press (Worcester, MA) began with a focus on commercial print, but over time have added digital color technologies. They have blended short-run color with supply-chain-management capability for sales-support materials. LaVigne Press reportedly offers "a whole new way to look at
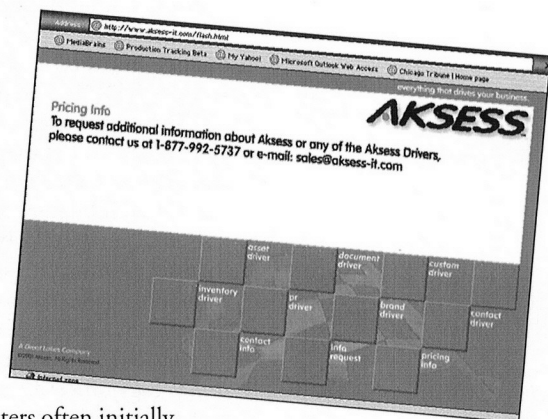
The Great Lakes Cos.' homegrown online system offers supply-chain management that supports their litho and digital print business.

Digital printers have found success by offering clients comprehensive marketing programs that maintain overall brand integrity but allow customization at the regional or local level.
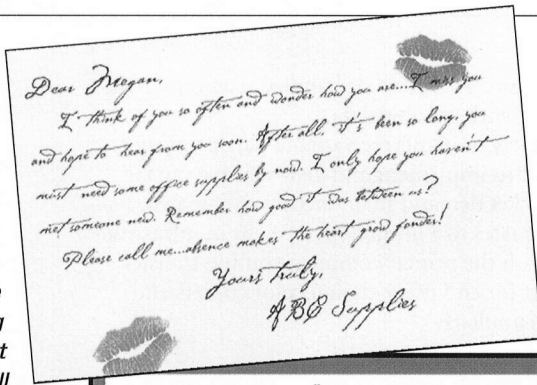
Internet on-demand services

Internet on-demand services ideally are Web-to-print marketing tools that allow corporations to create high-value, customized marketing collateral while reducing costs and maintaining brand image and integrity. These systems provide an easy-to-use browser interface that enables sales, marketing and customer-service departments to customize collateral to specific groups, then personalize them with the recipient's information from a database. For national corporations, local marketers ensure the content is relevant to market characteristics and nuances.

Fast-growing digital service providers, such as Lexinet (Council Grove, KS), are finding that this market model really works. Based on their direct-marketing backgrounds and technological understanding, Dan Adler and Lisa Boyer joined forces in 1991 to establish their own company. They wanted to deliver "on-demand" direct-mail programs that were dealerized, personalized and localized for any number of users—regardless of their location—and could be managed via the Internet. The company uses a combination of Xerox DocuTech and DocuColor equipment to produce custom-built materials for large insurance and real estate firms with outside agencies. The model is paying off. In 2002, revenues were up 34 percent.

printed collateral." The user can version, proof, ship and track jobs through an online system, 24 hours a day, from anywhere. Requested materials can be printed on traditional offset presses or on LaVigne's HP Indigo digital color press.

The Great Lakes Cos.' AKSESS system provides document management, kitting, fulfillment and distribution, all of which have supported the traditional lithographic business. The printer purchased a NexPress 2100 in January 2003. In less than six months, the digital press was running a shift and a half a day and delivering profits. "We had already developed the customer-facing applications to facilitate the process," explains chief technology officer Dean Hanisko. "Based on the range of traditional services we offer, Great Lakes has strong relationships with customers. We were providing them with everything but digital color. The addition was natural."

Overriding value proposition

The overriding value proposition for online print-supply-chain management includes content currency, inventory management and reduced inventory obsolescence. For the print service provider, integration into the client's supply chain means a substantial increase in customer loyalty due to the investment the client has made with the printer.

Based on the long-term history of these firms, significant infrastructure was already in place for finishing, fulfillment and distribution. LaVigne Press worked with Printable Technologies (Solana Beach, CA) to facilitate the customer-interfacing software; Great Lakes developed AKSESS internally. On average, for every dollar these printers spent on equipment, another dollar was spent on additional infrastructure, including software and staff support.

A proven approach for integrating and managing personalized mailing programs—hassle free. Dealers, agents, franchisees, sales reps, branches—no matter how far-flung your company or sales team, Lexinet can help you put together a winning direct mail program.

Fully customized communications

RT Associates (Arlington Heights, IL) realized comprehensive marketing programs that users could customize were key to business expansion. Founded in 1982, the company specializes in digital printing, prepress, photography and creative services. Combining Agilis variable-data software from Saepio (Kansas City, MO) and the NexPress 2100, RT Associates developed a solution that engages local marketers in the creation of content.

United Stationers (Des Plaines, IL), the largest wholesale distributor of business products ranging from office supplies to furniture, partnered with RT Associates to develop its direct-marketing and sales-collateral-management program, "Star Club." Whether they were a small, family-run business or a $250-million-per-year dealership, United Stationers realized its dealers were too busy to create direct-marketing programs. Resellers needed a way to produce timely, affordable and customizable marketing materials. RT Associates delivered a Web-based solution that gave dealers templates to produce one-

to-few and personalized materials at a local level. These applications contribute to a 23 percent year-over-year growth rate for RT Associates.

To support this level of application development, these firms invested heavily in infrastructure. In most cases the firm spent a minimum of $2 on technology infrastructure and support for every dollar invested in digital-color technology. Programming resource was essential to success. A minimum of 10 percent of the employees in these firms had IT backgrounds.

IT help for CRM

These printers' IT services support their clients' customer-relationship-management (CRM) initiatives. They have the ability to build documents that include variable text, pictures, graphics and bar codes, and to merge data. Using conditional logic, the dynamic documents are created where the entire layout varies with the input, rather than a "one-size-fits-all" document. (For example, if the recipient is female and over 30 years of age, the variable-data program would insert paragraph one and graphic three; if the recipient is male and less than 45 years of age, perhaps paragraph 12 and image five would be used.)

These companies have invested in high-speed digital color print technology, as well as the capabilities to provide electronic distribution. This enables documents to be published as printed pages and/or as e-mails, Web pages, PDF documents, SMS messages, XML files and faxes. The value proposition for their clients is maximization of the return on marketing dollars. In addition, they often provide consulting services, such as data mining, to help clients find the most appropriate target segments.

Customer-created ads

Rastar Digital Marketing (Salt Lake City), a digital printing and database-marketing specialist, has targeted the automotive industry for its digital-print services, working with auto dealerships on both customer acquisition and retention programs. Through data mining, Rastar helps dealerships identify "high-profit" customers in their primary market area and builds a communications program that reaches them individually. Three personalized, full-color pieces are then sent out over an eight-week period to drive traffic into the dealership. These communications pieces introduce the dealership to the prospect and offer current service specials along with an incentive to those in the market for a new vehicle. As soon as a prospect responds or comes to the dealership, he or she is immediately enrolled in a one-to-one marketing program. Lexus website users who customize a car's colors and features online, for example, will later receive a personalized brochure in the mail, featuring their selected design.
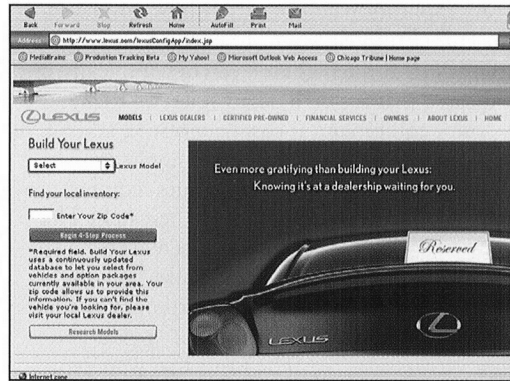
Information entered via this website later populates a brochure template with elements personalized to both the recipient and dealer.

The mailings are Internet-template driven, so the dealership can add unique information about their specific location, including text, photos and special offers. Once the prospect is converted to a customer, Rastar works with the dealership on customer retention. The program incorporates service offerings as well as incentives for purchase of the next car. Rastar has leveraged HP (Palo Alto, CA) Indigo technology to produce these variable-data campaigns. Blending Internet services, comprehensive data mining and variable data has also had a strong impact on Rastar's earnings—2002 was a year of double-digit revenue growth for the company.

Getting personal

Prudential is a key customer for Royal Impressions (New York), a company that specializes in sales and marketing communication using both digital and offset equipment. A critical component of Royal Impressions' business is success with 401(k) plans for large corporate clients. Facing challenging financial markets, Prudential sought marketing techniques to increase its base of corporate 401(k) clients as well as help existing clients maximize employee participation.

Royal Impressions helped Prudential develop a solution that was personalized to each individual. The result were financial advisory reports and 401(k) plans combining personal information relative to individual income, age, and marital and family status with a recommended monetary contribution. Full color aided comprehension. Royal Impressions mailed the document to the individuals' homes on behalf of Prudential. Because information in the statements was highly confidential, the job required 100 percent accuracy.

The customized approach attracted new corporate customers to Prudential, and existing corporate customers also increased participation. Royal Impressions doubled its digital revenue growth through this program.

How to profit from digital print

How can print service providers and equipment vendors promote greater digital color profitability?

1. Emphasize your profitability strategies rather than cost per sheet

2. Vendors can offer easy implementation tools to assist customers with more advanced applications, including Application Service Provider options that give printers the ability to "rent" infrastructure

3. Make sure your business plan budgets for the true costs of related infrastructure.

As application complexity climbs, so, too, does the cost of implementation. Firms delivering applications at the highest levels of complexity indicated that for each dollar spent on digital color equipment, it cost between $2 and $3.50 to support the application. These companies required programmers on their staff. They also invested in marketing specialists that could "talk the talk" of the corporate marketing executive.

The firms that were typically delivering Internet on-demand applications and fully customized communications were relatively new to the world of printing and publishing. These companies had a vision and adequate funding to support their vision: The investment in infrastructure clearly delivered results for these companies.

IT investments

Across all firms surveyed, the average level of investment tended to be $1 on infrastructure, which can include networking, software, server technology and support, for every dollar spent on digital-printing equipment. The fastest-growing establishments had the highest levels of investment in infrastructure. These operations had a strong Internet infrastructure and were focused on delivery of either Internet on-demand services or fully customized communications.

The most successful digital printers also understood that information technology (IT) was becoming a driving force in the world of printing and publishing. Across all firms interviewed, eight percent of the total employee base consisted of IT professionals, including database, hardware and networking experts. Firms that had implemented an Internet on-demand or fully customized communications

As application complexity rises, so, too, does the cost of implementation. These 401(k) materials (above) combine color with personalized information based on recipient income, age, marital status and more.

model, on the other hand, employed a higher percentage of IT professionals as part of its staff.

Finally, the average digital color print volume was significantly higher per month for firms that had implemented an Internet on-demand or fully customized communications model than others that invested in their supporting infrastructure. Monthly impression volumes exceeded one million for firms with a combination of good infrastructure and a solid base of IT professionals.

### Key digital-print considerations

Based on these findings, printers must consider some key issues as they evaluate the most appropriate digital-printing technology for them:

- **Identify the target market and application mix.** The printer can then assess the real level of investment required to meet that market's needs.
- **All four digital-color business models hold value.** Quick printers and in-plants deliver convenience, fast turnaround and quality color. The supply-chain-management model emphasizes taking process cost out of collateral production. Internet on-demand service providers are moving the power of personalization into the hands of the agent or franchisee while protecting the corporate brand. Fully customized communications are yielding marketing ROI. The print service provider can migrate up the value chain over time as part of its overall strategy, ultimately deriving greater revenue from more advanced services.
- **Expanded service levels** integrating database supply-chain-management, Internet customer-interfacing applications and documentation are linked to high-revenue growth potential. This requires support infrastructure and appropriate IT staffing.

Invest for digital success

Digital color isn't simple: It takes hard work, expertise and an infrastructure to deliver growth. But successful users like Rastar Digital Marketing, Lexinet and Great Lakes Cos. have proven there is real profitability associated with digital color, *if* properly implemented to meet the needs of customers and aligned with the capability of the digital service provider. If you're investing in digital color printing, make sure that your business plan reflects the true costs of building a successful business.

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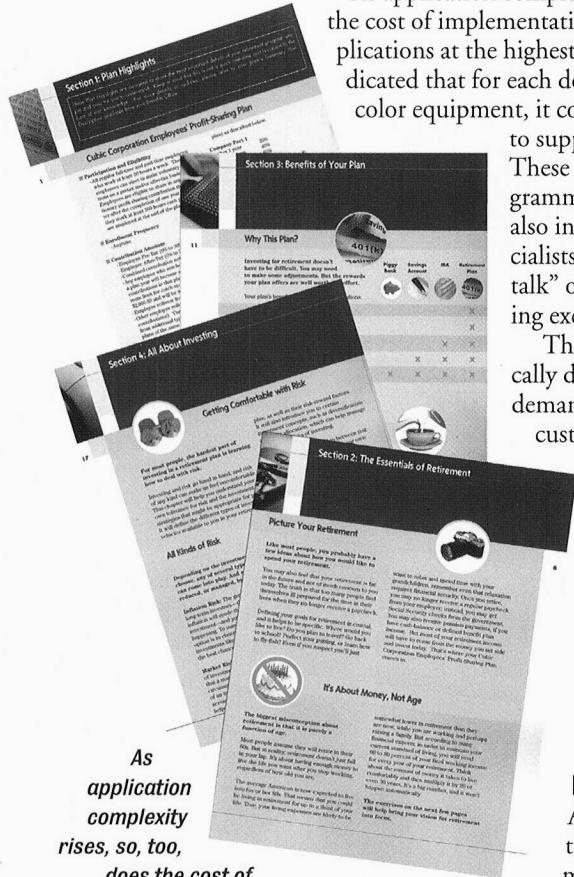
Relationship between annual growth and infrastructure and IT focus

Firm	2002 annual growth	Ratio of technology infrastructure investment to equipment (in dollars)	Number of employees	Percent of employees with IT focus
RT Associates	23%	3.5 : 1	62	10%
Digital Marketing	30%	2 : 1	65	20%
Lexinet	34%	2 : 1	40	32.5%
Royal Impressions	41%	3.5 : 1	50	22%