Industry Trends in Fulfillment, Finishing and Distribution

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Table of Contents

Executive Summary

Today's printing industry is in a state of transition. It has become an industry that no longer solely relies on print for sustainability. Thus, printers as well as print services providers are incorporating different strategies into their business models to provide the types of services that customers now require in order to achieve their own business goals.

In an effort to better understand the impact of these emerging trends, a research study was undertaken through the Printing Industry Center at the Rochester Institute of Technology (RIT). The primary research objectives for this project were:

1. To clearly understand the changing business dynamics in the printing industry.

2. To build on a previous RIT Printing Industry Center research study, which identified the nature and variety of services offered by digital and traditional printers (Pellow & Sorce, 2003).

3. To identify current and future trends in finishing, fulfillment, and distribution services.

4. To determine:
    a. the degree to which fulfillment is offered as a value-added service
    b. the types of fulfillment services that are typically offered, and
    c. whether companies that offer this service are realizing a profit.

5. To add to the current base of research on the topic.

The research sample consisted of databases from the Finishing Resources Inc. and the Binding Industries of America (BIA). Finishing Resources Inc. has 980 members, 74.5% commercial printers and 25.5% trade finishers. BIA has 115 members, of which 50% are trade finishers and 50% are equipment suppliers. The survey, which was administered via the Internet, consisted of five sections: 1) demographic profile, 2) industry business trends in finishing and distribution, 3) value-added services, 4) fulfillment services, and 5) comments.

Analysis of the research data revealed key findings summarized in the following three areas:

1. **Changing Business Dynamics in the Printing Industry**
    The majority of the respondents represented large companies employing more than 100 people. This appears to be consistent with the increasing trend of mergers and acquisitions taking place within the industry. This increase is primarily due to companies changing their business strategy from being recognized solely as print providers to becoming communications solutions providers by offering various other value-added services.

2. **Current and Future Trends in Finishing and Distribution**
    Significant improvements in finishing and distribution have occurred over the past 10 years. Finishing and distribution have become key value-added services that companies are bringing in-house. While binding, folding, gluing, and stitching are the primary in-house services offered, specialized finishing such as die-cutting, embossing, and foiling are frequently outsourced.

3. **Fulfillment Trends**

   Fulfillment appears to be one of the primary value-added services offered by printers and finishers. Product fulfillment remains the most popular type of fulfillment offered, followed closely by Internet, kitting, and literature. The status of fulfillment revenues remains unclear, since 42% of respondents did not answer the question.

Significant opportunities remain for future research. Two specific areas are profit models and value-added services probability along with current distribution workflow processes.

Introduction

A study published in the *PIA/GATF 2004 Print Market Atlas* (Kodey, 2004) reports that there were 44,514 U.S. operational printing establishments at the end of 2003. This number represents a reduction as compared to the 47,000 establishments reported in 2001. Industry analysts largely attribute this reduction to the numerous acquisitions and mergers taking place in the printing industry among larger companies and to the continual closing down of smaller printing firms.

Today's printing industry is in a state of transition. It has become an industry that can no longer rely solely on print for sustainability. Thus, printers as well as print services providers are incorporating different strategies into their business models to provide the desired services that customers now require to meet their own business goals.

In an article published in *GATFWorld*, Naselli and Romano (2003) discuss the importance of value-added services for printers. They point out the need for printers to "think beyond the presses" and to contemplate offering non-print services. It is essential for printers to realize that not only is the demand for print changing, it is also declining.

An emerging key to profitability appears to be providing ancillary or value-added services. Ancillary services account for more than 7% of total print revenues and are projected to account for a larger share in the coming years. It has been estimated that for every marketing dollar spent on print, there is another five dollars devoted to ancillary services. Printers looking for growth are increasing their focus on these types of services.

In the *NAPL 2003 State of the Industry Survey* (Paparozzi, 2003), value-added and communi-cation-support services were identified as the third highest service that would be demanded in the next two years. Additionally, finishing and distribution were designated as the areas where these growth opportunities would occur.

Diversification of services will be critical to the continued success and growth of the printing industry. Finishing operations and services frequently provide greater opportunities to add value and define competitive advantages than printing. The move into more services is one reason why some distributors have developed internal printing and finishing operations. The challenge for manufacturers is the need for additional investment in equipment, systems, and training to update and expand finishing capabilities, and the need for marketing to show the value and variety of new products created by finishing operations.

OVERVIEW OF PRINTING INDUSTRY

The U.S. Department of Commerce classifies all industries in the U.S. by Standard Industrial Classification (SIC) numbers. In this classification system, the printing industry is part of SIC number 27 (Printing and Publishing). Department of Commerce information indicates the U.S. printing and publishing industry consists of more than 65,000 individual establishments employing more than 1.5 million people (Wilson, Gentile, & GATF Staff, 2002). The number of individual firms has changed in the last decade as mergers and acquisitions have increased, with a greater number of smaller firms under the umbrella of larger organizations. In 1998, industry yearly sales exceeded $146 billion (Wilson, Gentile, & GATF Staff, 2002). These figures place printing and

publishing among the top five U.S. industries in terms of number of individual establishments and in terms of number of employees.

In many circles the printing industry is referred to as the graphic communication industry. The graphic communication industry is described as (Weir, 1998):

> The industries and processes that create, develop, produce, and disseminate products utilizing or incorporating words, illustrations, or photographic images to convey information, ideas, and feelings; this includes the family of market segments which embrace existing and emerging technologies of printing, publishing, packaging, electronic imaging, and their allied industries.

This industry encompasses all phases of the graphic communications processes from origination of the idea (design, layout, and typography), through reproduction, finishing, and distribution of printed products or electronic transmissions.

Printing Companies

The printing industry is still dominated by small - to medium-sized companies that employ 1 to 25 people (Wilson, Gentile, & GATF Staff, 2002). There are the very large companies that employ many hundreds or thousands of workers, but they account for a very small portion of all the companies involved with the print trade. Regardless of size, these companies employ hundreds of thousands of people in a variety of challenging occupations, which demand expertise or understanding of art/design, color, computers, engineering, management/business, manufacturing, people/personnel, photography, sales/marketing, or science. As a result of these processes, printing companies are able to create and produce a spectrum of products used in daily life.

Markets and Applications

The printing industry caters to an array of niche markets. While some printing companies specialize in offering a specific product, others offer a diversified range of products and services. Various pundits and associations have attempted to classify the products manufactured by this industry. The NAICS (North American Industry Classification System) has been working for years to upgrade its classification to incorporate the vast spectrum of products produced by this industry. According to Wilson, Gentile and GATF Staff (2002), some of the key print markets are:

- General Commercial Printing
- Book Publishing
- Business Forms Printing
- Catalog and Directory Printing
- Direct Mail Printing.

Trends

Despite the printing industry being around for over 550 years, printers are being forced to re-evaluate the profitability of their core businesses. In 2002, the printing industry witnessed its deepest decline in real print activity in the past three decades. Between 1999 and 2001, over 21,000 presses (12%) became obsolete, resulting from inefficient demand (Alexander, 2003).

The NAPL (*NAPL Chief Economist*, 2004) states that the printing industry is finally showing signs of what may be a sustainable upturn, following more than two years of steep and broad sales declines. The NAPL (*NAPL Chief Economist,* 2004) forecasts that print sales will grow as much as 4.1% in 2004, compared to 2.6% in 2003. Despite the gross domestic product (GDP) growing at 7.2%, the NAPL believes printing companies can no longer rely on an economic rebound to grow their businesses. The economy is rising rapidly especially with the elections and Olympics this year. According to the NAPL, not long ago all of this would have meant good times across our industry. Currently, however, printers are being forced to prepare for growth in markets that are increasingly competitive in numerous ways. According to Paparozzi (2004), the printing and graphic communications industry is entering a new phase of the business cycle. Printers need to be flexible, opportunistic, creative, and smart in order to thrive in these changing times.

Davis (2004) states that current demand for printed products and services are primarily driven by economic growth, the Internet and customer behavior. Consequently printers are incorporating a differentiated value-added strategy into their business models in order to provide the desired services that customers now require in order to meet their own business goals. Offering value-added services has become a trend in the printing industry.

FINISHING AND DISTRIBUTION

As printers come to grips with the market effects of overcapacity, consolidation, shorter runs, and squeezed margins, many are surprised to discover that a technology revolution has been quietly building strength in the most unlikely corner of the print shop: the bindery.

After years of healthy investment in prepress and press, printers are noticing that their bindery is inefficient, unproductive, and poorly suited to the short-run requirements of today's print market. At the same time, printers are recognizing how much innovation equipment manufacturers are bringing to the bindery.

Few printing jobs are delivered to the customer in the same form that leaves the printing press. Some work, such as simple business forms or posters, requires no additional handling other than boxing or wrapping. However, the vast majority of printed products require some sort of additional processing to meet the job requirements. The operations performed after a job has left the press are called finishing and distribution.

Finishing

While the postpress area may not have seen the same radical technological change that has taken place in prepress departments and press rooms over the past 10 to 15 years, there have been significant improvements in speed, due primarily to digital and computer applications.

Digital printing sparked a wave of in-line finishing development several years back with high-speed, monochrome printers, like the Xerox DocuTech and Heidelberg DigiMaster,

leading the way with a range of in-line saddle-stitching, perfect-binding, and even three-side trimming options. These systems support variable sheet-count and variable information jobs with full integrity, because the sheets never leave the system.

Trends
In 1999, six critical trends in finishing were identified by several industry consultants (Prince, 1999):

1. Selectivity/Targeting
2. Personalization
3. Gimmicks
4. Distribution
5. Customer Service
6. Automation.

Although these are still key trends in finishing, over the past five years they have been modified to include a focus on the human resource aspect of finishing. Due to reported labor shortages, much attention is being given to acquisition, training and retention of finishing personnel. The Research and Engineering Council of NAPL is studying each of these modified trends (Cummings, 2003):

1. Automation
2. Creative Print Finishing
3. Customer Service
4. Distribution
5. Personalization
6. Retention and Training
7. Variable Data Printing.

The key in the future will be communication and education. Printers and trade finishers need to openly discuss jobs before they are produced. By forming relations and strategic alliances, they can collectively educate customers, which will in turn benefit all concerned.

Distribution
Distribution of printed materials involves the movement of product from the production site to an internal (e.g. warehouse) or external (e.g. customer) location. Key issues in distribution include cost, material handling, storage, and safety.

Offering mailing, warehousing, and distribution have become distinctively advantageous for printers. Cagle (2003) states that, presently, mailing capabilities may seem like a value-added bonus service, but two years from now, those companies that have not committed to this discipline will find themselves in an unenviable minority. According to the Arandell Corporation located in Wisconsin (Cagle, 2004), adding mailing services has increased incoming work in their company and customers have taken to the one-stop-shopping mentality. Heller et al. (2003) suggest that mailing has never been as important as it is today. Due to considerable advances in technology such as digital printing and variable data printing, it has become much easier to get a printed piece to a customer.

Trends

Traditionally-produced print workflow is from creative to prep to film output, from which a plate or a cylinder is made. As prepress has gone digital, film is being replaced by direct-to-plate output. A print master, therefore, is created for use on a press to produce as many copies as required. With few exceptions, the entire print run is produced at a single location. Following printing and binding, printed material is sometimes entered directly into a distribution channel to be delivered to the ultimate reader or user. Printed materials frequently are warehoused for later distribution. This traditional workflow is known as print-and-distribute.

A new workflow reverses these steps and distributes a job in an electronic format to a remotely located print site for reproduction. This workflow has been described as "print's great paradigm shift" or distribute-and-print. CAP Ventures defines distribute-and-print as electronically distributing a file and then physically printing the job near the point of final delivery (Lamparter, 1998).

It appears that customers will select a distribute-and-print option more frequently in the future. Therefore, printing companies must continue to assess the financial impact that will result from extreme reductions in printed material and look for other business ventures to replace this lost profitability.

DIVERSIFICATION OF SERVICES

Since the late 1990s, combined prevailing economic and technological forces have restrained revenue growth and depressed earnings of most U.S. commercial printing companies. Dodd and Lavelle (2004, p.5) state that for several years, a growing chorus of graphics arts industry economists, analysts, authors, and consultants have been admonishing printers to "reinvent" their businesses to meet the competitive challenges of a rapidly evolving graphic communications marketplace. Consequently, an increasing number of companies have adopted value-added services in order to address the growth and profitability crisis that is plaguing the industry. Concentration on value-added services has increased intensely as the U.S. recently endured its worst recession in over two decades. As the industry consolidates further and continues to shrink, only those companies that are able to distinguish themselves and satisfy unique customer needs succeed.

In order for companies to be successful with service diversification, the following issues need to be considered (Paparozzi, 2003):

- cost of incorporating additional services

- altering perspectives of internal clients to accept changes in strategic direction

- establishing/ensuring continued profitability.

Additionally, obstacles to growth when offering diversified services that were identified included:

- marketing the company and its respective services more effectively to ensure achievement of strategic and business goals

- changing client perspectives to expect and request diversified services

- upgrading current equipment and purchasing new equipment to support a diversification strategy.

Value-Added Services

Graphic communications is no longer print-centric. Companies are confronted with ever-increasing competitive pressures and "print apathy," threatening to increasingly commoditize the industry. In addition, the industry is built on a traditional structure catering to a certain volume of manufacturing that is no longer required. Smith (2004) states that for years now industry experts have been advising printers of the need to diversify and offer value-added services in order to thrive. According to Naselli (2004), companies will continue to consolidate both in the supplier and provider arena, refining their business models. Successful print services providers will be those that strive to differentiate themselves and protect declining margins by offering an array of value-added services designed to meet specific customer needs. According to *TrendWatch* (2004), value-added services are becoming the lifeblood of the commercial printing business, both in terms of profitability and customer relationships. NAPL (*NAPL Chief Economist*, 2004) states that:

> Companies must understand their customers like never before. The more printers can understand why their customers choose print to communicate a message and why they should spend a greater percentage of their communications dollars in print, the more financial success they will enjoy.

According to NAPL, the only way in which printers can combat current challenges they are facing, as well as remain competitive, is by offering diversified services.

Based on the pilot survey conducted by the RIT Printing Industry Center for this study in 2004, value-added services can be defined as those services that offer customers a one-stop-shop solution that increases the value of the product offered, by promoting efficiency and reducing customer costs. On the other hand, Dodd and Lavelle (2004, p.12) define value-added services as any non-print, graphic communications-related service. According to Alexander (2004), service diversification can occur before the print run (such as design and photography), after the print run (such as fulfillment, mailing services, document management and CD services),

or as overall enhancements (such as variable data, web services and facilities management). Dodd and Lavelle elaborate further, suggesting that these services would include art, design and creative services, fulfillment services, mailing services, client training and consulting, database management services, Internet/Web services (such as page design and hosting), CD services, and facilities management services. In addition, value-added services could include other communications-related services such as marketing campaign design and implementation, and document management.

In the 2003 NAPL *Future of Print Survey* (Paparozzi, 2003), respondents predicted an increase in value-added services such as fulfillment, mailing, creative services, digital asset/database management, and web services. According to Dodd and Lavelle (April 2004), more and more printers and converters are extending their markets and diversifying their service offerings beyond ink and paper, turning downstream in the long-run production chain to offer mailing and fulfillment services. Of all the value-added services that printers offer their customers today, either as generators of increased press work or as cogs in a one-stop service machine, fulfillment is one of the most economical and popular options.

Fulfillment

According to the *TrendWatch Printing Forecast 2004*, 22% of respondents cited broadening fulfillment, shipping, and mailing capabilities as top sales opportunities. The NAPL *2003 State of the Industry* survey (Paparozzi, 2003) suggests that nearly 70% of respondents plan to offer fulfillment and/or mailing services in the coming 12 to 18 months. Nickel-Kailing (2004) further suggests that with margins between 4% and 6%, fulfillment is expected to become much more than a value add for most printers and services. Paparozzi (2003) reaffirms this, stating that when respondents were asked whether offering value-added services such as mailing and fulfillment increased their revenue from traditional sources as well, they answered in the affirmative over 4 to 1. *TrendWatch* (2004) claims that while commercial printers tend to generate 1% net profit from printing services, mailing and fulfillment services providers are generating 4% to 10% profit margins.

In the *NAPL 2003 State of the Industry Survey* (Paparozzi, 2003), 59.6% of respondents expected that fulfillment will be the fastest growing service in 2004. According to Sherburne (2004), fulfillment services are the "icing on the value-added cake." Sherburne further states:

> As customers increasingly seek end-to-end solution providers who can address specific business processes in a turnkey fashion, leading print service providers are jumping into the fray, offering their customers integrated business solutions in which fulfillment and distribution play a key role.

Fulfillment can be defined as the storing and distribution of products directly to end-users, after the initial job has been printed and mailed. Valentino (2004) elaborates on this definition, suggesting that fulfillment comprises the storage, management, and timely distribution of a client's materials (literature or products, for instance) to that client's distribution outlets or end users. Valentino further suggests that fulfillment is more client-driven than any other diversification area. Based on the NAPL *Survey of Fulfillment Practices* (2004), fulfillment applications include the following:

- Literature
- Kitting/assembly
- Product
- On-demand printing
- Database management
- Point-of-purchase
- Contract packaging
- Premiums
- Special events/conferences
- Personal support services
- Returns
- Franchise
- Rebate/coupon redemption
- Lead tracking.

Types of Fulfillment

Fulfillment services can range from simple pick-and-pack operations to sophisticated Web-enabled programs that offer client interfaces with order and inventory management (Valentino, 2004). Cummings and Gallagher (2003) give three basic types of fulfillment:

1. **Literature fulfillment**
   Literature fulfillment involves the physical distribution of company information such as brochures, point-of-purchase (POP) displays, and product catalogs. Typically customers request the assistance of the printer in designing, printing the informational document, product finishing, warehousing, and ultimately distribution to individuals and businesses.

2. **Product fulfillment**
   Product fulfillment encapsulates the distribution of goods such as magazines, CDs, audiotapes, free samples, and premiums to retail outlets, subscribers or consumers. Typically, for example, the printer would assemble kits containing printed postcards, booklets and other promotional items and then ship them directly to potential customers.

3. **E-fulfillment**
   E-fulfillment is also known as Internet fulfillment. It involves the electronic distribution of a requested product such as coupons and certificates or company information or literature such as newsletters, brochures or flyers. This type of fulfillment least utilized by printers, since the value proposition is still being explored.

Foundation for Fulfillment Success

Valentino (2004) states that the scope and complexity of a business should not be underestimated and a successful fulfillment division should be based on the following principles:

- Customer needs should be used as a springboard for programs and services.

- A facility should be designed for maximum efficiency and productivity.

- A highly skilled fulfillment manager and qualified customer service representatives should be employed.

- All employees should be continuously trained.

- Fulfillment should be operated as its own profit center.

- Customer requirements should be determined and carefully documented for every program.

- Internal costs and a pricing program should be documented reflecting the value other services.

- Information technology and Web services should be leveraged to enhance the services offered.

- Fulfillment should be marketed to reflect how it would help clients build their business.

- Service should be continuously improved.

Responses to the NAPL *Survey of Fulfillment Practices* (2004) demonstrate that companies are achieving positive results with fulfillment. The service is boosting print volume, improving profitability, and enhancing client loyalty. In a market where gaining and defining share has become critical, such attributes make fulfillment quite appealing and an area to be explored.

Research Objectives and Methodology

RESEARCH OBJECTIVES

The primary research objectives for this project were:

1. To clearly understand the changing business dynamics in the printing industry.

2. To build on a previous RIT Printing Industry Center research study, which identified the nature and variety of services offered by digital and traditional printers (Pellow & Sorce, 2003).

3. To identify current and future trends in finishing, fulfillment, and distribution services.

4. To determine:
   a. the degree to which fulfillment is offered as a value-added service
   b. the types of fulfillment services that are typically offered, and
   c. whether companies that offer this service are realizing a profit.

5. To add to the current base of research on the topic.

METHODOLOGY

The project explored current industry trends in fulfillment, finishing, and distribution. The research methodology used to gather data was:

1. An in-depth secondary research study was conducted in order to provide a foundation for the composite research study.

2. Several meetings (via conference call) were held during February and March 2004 with an established focus group, comprised of printers and print services providers. The members of the focus group represented companies that offer fulfillment and other finishing and distribution services. The data and insight gathered from the focus group were used to develop the pilot survey instrument.

3. The survey, after being approved by various RIT faculty members and the focus group participants, was pilot tested at the Research and Engineering Council of NAPL's 46th Annual Binding, Finishing and Distribution Seminar held in April 2004 in Chicago. The survey was administered to 150 attendees at the seminar composed primarily of printers, print service providers, and print suppliers. A 41% response rate was achieved. A summary of the results follows. Note: For several questions, respondents were instructed to "Check all that apply." Therefore, in most cases the total % exceeds 100%.

Pilot Survey Results

a. Demographics
The majority of the respondents worked in finishing businesses (70%), followed by conventional printing establishments (41%), fulfillment houses (39%), prepress houses (39%), digital printing businesses (34%), and equipment supply firms (26%).

The markets served directly correlated with the type of business. The sample was composed of 82% commercial printers, 32% specialty, 31% packaging, 27% other, 26% forms and labels, and 21% trade services.

Additionally, 54% of the sample was made up of large companies employing 200 or more employees.

b. Value-Added Services
Respondents were asked to define value-added services. The major theme from those who responded to this question was that it was the process of creating a one-stop-shopping service for customers. Forty-one percent of the respondents stated that they have been offering value-added services for more than 10 years.

The majority of the value-added services were offered in-house. The primary services were: consulting (34%), data asset management (33%), distribution (54%), e-commerce (26%), finishing (61%), fulfillment (49%), mailing (49%), print-on-demand (41%), variable data printing (39%), and web-to-print (39%). The primary reasons selected for offering these services were competitive advantage (54%), followed by strategic decision (54%), and the fact that the services requested by customer (43%).

In terms of revenue, 29% of the respondents claimed that offering these services met revenue expectations. It was unclear whether these expectations were positive or negative.

c. Fulfillment
Forty-six percent of the respondents offered fulfillment as a service. The majority was offered in-house (product—39%, internet—25%, literature—21%). However, only 22% claimed that the service was meeting revenue expectations.

After reviewing the responses and response rates from the pilot survey, appropriate modifications were made to ensure more meaningful results from the final survey.

4. The final survey was administered via the Internet to the Finishing Resources Inc. and the Binding Industries of America (BIA) databases. Finishing Resources Inc. has 980 members, 74.5% commercial printers and 25.5% trade finishers. BIA has 115 members, of which 50% are trade finishers and 50% are equipment suppliers. The researchers selected these populations because the membership companies are representative of those businesses that would most likely offer finishing, distribution, and other value-added services. It is also assumed that this population is an adequate representation of commercial printing and finishing companies in the U.S.

As an incentive to complete the survey the respondents were offered the RIT *Test Targets 3.0* publication or the RIT School of Print Media 2002 New Media Senior Project, a book entitled *Hand of a Master*. The response rate from Finishing Resources Inc. was 3% and the response rate from BIA was 11%.

Results

FINAL SURVEY

Section A. Demographic Profile

1a. Type of Business (see Figure 1)
Respondents could select multiple choices to describe their type of business. The majority (64.6%) indicated finishing as their business type. The most frequent selection was full service provider (41.7%), defined as a company that provides a full range of production services that begins with prepress and continues through to distribution. Conventional printers (37.5%) and fulfillment (31.3%) are reported as the next primary business types. The respondents selecting the "other" category (29.2%) were representative of a variety of equipment manufacturers and suppliers.

2a. Markets Served by Business (see Figure 2)
Approximately 65% of the respondents provide services to the commercial printing market, followed by trade services (52.1%) and mailing services (47.9%). Commercial printing is defined as encompassing markets such as catalogs, newspapers and magazines. Trade services include binding, finishing, and distribution. The category "trade services" was incorporated based on inputs from the respondents in the pilot survey where it was listed multiple times under "other." Thus it was evident that this area is recognized as a market sector for printing and finishing providers.

3a. Number of Employees at Business Location (see Figure 3)
The majority of the respondents were employed by companies with over 200 employees. Full service providers were the most dominant in this area. Fourteen of the 21 respondents who consider themselves full service providers work in companies with over 200 employees.
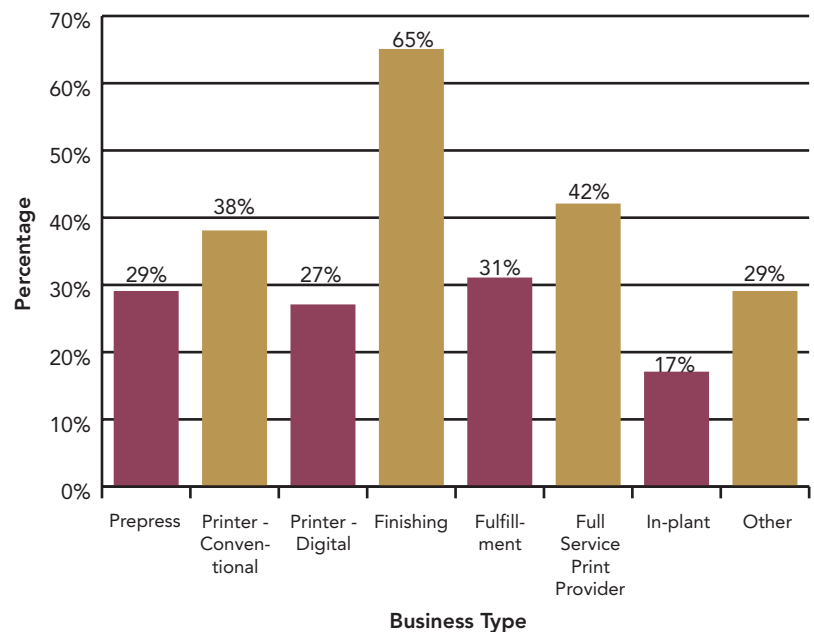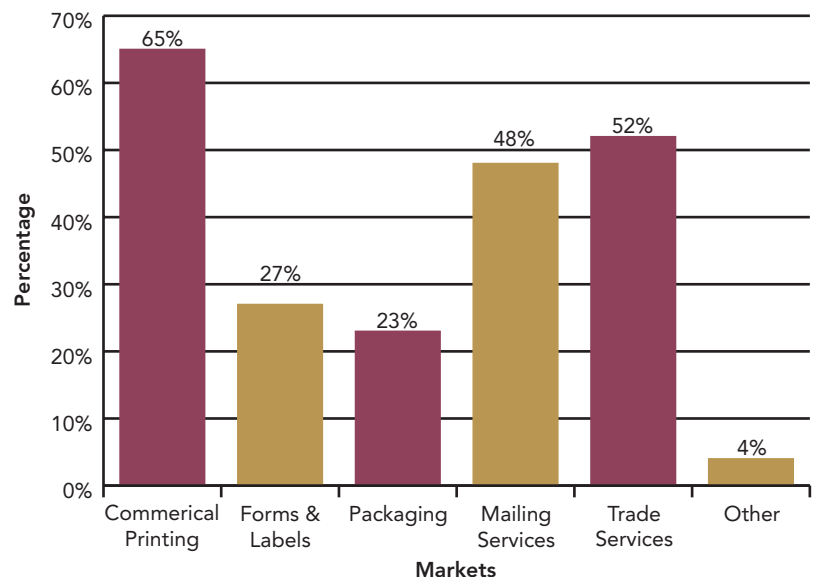

Figure 1. Type of Business

Figure 2. Markets Served

Additionally, 11 of 18 conventional printers and 9 of 14 prepress firms employ over 200 people.

4a. Your Job Title/Position and
5a. Years Employed in the Printing Industry (see Table 1)
The cross tabulation shows that of the 43 people responding to this question more than 50% (22) were in senior management positions (president, vice president, director). All of the senior managers had been employed in the printing industry at least 11 years. Over 80% of this group had been employed in printing for more than 16 years.
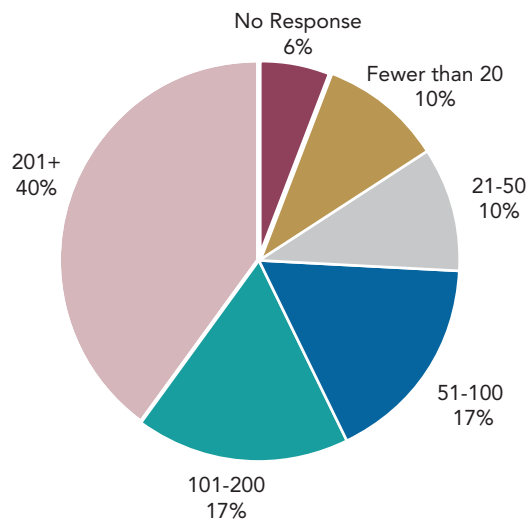

Figure 3. Number of Employees

When looking at the general relationship between business type and years employed, finishing has a significant relationship (p=0.049), with 27 of 31 respondents having over 16 years of experience.

Section B. Industry Business Trends in Finishing and Distribution

Respondents were allowed multiple responses for all questions in section B, and thus total percentages for responses may exceed 100%.

1b. What standard finishing services does your company offer? (see Table 2)
Binding was indicated to be the most standard finishing service offered. Stitching, folding, and gluing represented the next most frequent services offered. Die-cutting, embossing, and foil stamping were among the least frequent services offered, but are the most frequently outsourced. There was a 31% response in the "other" category, where "mailing," "polybagging/wrapping," and "printing" were the most frequent services given in open-ended responses.

2b. How have finishing processes improved/ evolved in your company over the past 10 years?
It is evident that the survey respondents believe that finishing processes have improved in their companies over the past 10 years. Respondents were asked to consider the impact of automa-

Job Position	No Response	Less than 2 years	6-10 years	11-16 years	Over 16 years	Total
No Response	3	-	-	-	-	3
President	-	-	-	1	12	13
Vice President	-	-	-	-	9	9
Director	-	1	-	-	2	3
Production Manager	-	-	-	-	2	2
Finishing Supervisor	-	-	-	2	2	4
Other	-	-	-	3	10	14
Total	3	1	1	6	37	48

Table 1. Relationship Between Job Position and Years Employed

tion, increased productivity, and waste reduction on the improvement or evolution of their companies. Of these three areas, automation was the primary factor (87.5%), followed by increased production (79.2%), and waste reduction (58.3%).

3b. How has finishing management improved/evolved in your company over the past 10 years?
Respondents were asked how empowerment of employees, better project management, improved hiring/training, and improved communication has improved or allowed for the evolution of finishing management over the past 10 years. Based on the responses it is evident that each of these factors has been significant in improving finishing management. Response percentages were as follows: empowerment of employees (69%), better project management (56%), improved hiring/training (58%), and improved communication (68%). Other factors indicated were a more significant focus on customers and profitability.

4b. How have distribution processes and procedures evolved in your company over the past 10 years?
Respondents were asked whether automation, productivity, and decreased delivery times had assisted in the evolution of distribution over the past 10 years. Responses were as follows: automation (62.5%), productivity (58.3%), and decreased delivery time (75.0%). Based on the percentages, respondents clearly recognize an improvement in distribution processes and procedures over this period of time.

Section C. Value-Added Services

1c. What value-added services does your company offer? (see Table 3)
Different people interpret value-added services differently. Consequently, a definition of value-added services based on the responses received from the pilot survey was given at the beginning of this section. E-commerce (71%) was the most popular in-house service being offered, followed by fulfillment (54%), digital asset management (54%), and finishing (52%). Web-to-print was the least offered in-house service (4%). All services were offered in-house more often than outsourced, though fulfillment

Service	In-house	Outsource
Binding	73%	4%
Diecutting	29%	25%
Embossing	23%	25%
Foil Stamping	27%	25%
Folding	56%	10%
Gluing	56%	4%
Stitching	58%	8%
Other	31%	2%

Table 2. Finishing Services Offered

Service	In-house	Outsource
Consulting	31%	4%
Digital asset management	54%	2%
Distribution	21%	0%
E-commerce	71%	0%
Finishing	52%	4%
Fulfillment	54%	6%
Mailing	25%	4%
Print on demand	29%	2%
Variable data printing	23%	2%
Web to print	4%	0%
Other	6%	0%

Table 3. Value-Added Services Offered

(6%), mailing (4%), and consulting (4%) were the top outsourced services. Respondents that selected "other" offered warehousing and press art capabilities as in-house value-added services.

2c. Why did your company decide to offer these services?
The primary reason for offering value-added services was competitive advantage (64.6%), followed by strategic decision (62.5%), and the service being requested by customers (54.2%). Some respondents elaborated on their response by selecting the other option, stating that they want to be able to differentiate themselves from their competition, better understand the needs and demands of their customers, and ultimately identify an additional profit opportunity.

3c. How long has your company offered value-added services? (see Figure 4)
It appears that value-added services have been offered for more than 10 years (46%). Only 2% have offered them for less than a year and 17% between 1 and 5 years.

4c. What was the primary strategy used to integrate these services into the existing business workflow?
There were no major trends identified in the strategy adopted to implement value-added
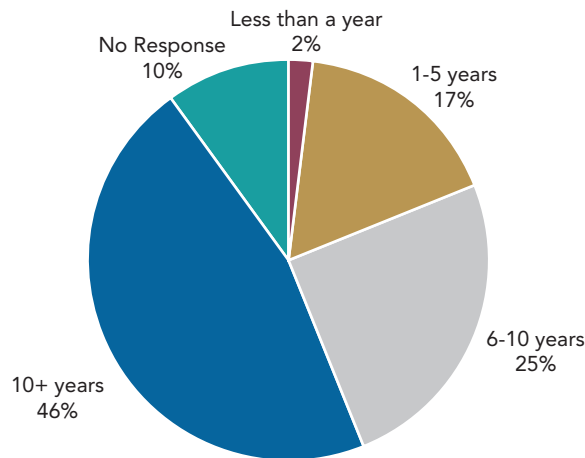

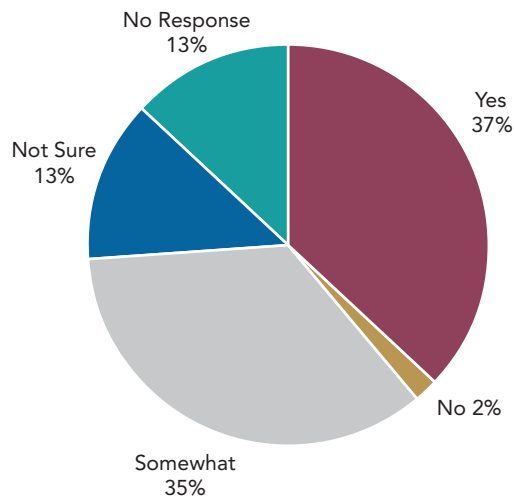Figure 4. Duration of Value-Added Service Offered

Figure 5. Value-Added Services Meeting Revenue Expectations

services. In-house developments (29.2%) was the most popular strategy used, followed by outsourcing (25.0%), acquisitions (20.8%), and partnerships (20.8%). Consequently, it appears that the strategy adopted is more of a preference rather than a trend.

5c. Are the value-added services that your company offers meeting revenue expectations? (see Figure 5)
Revenue expectations in this context could refer to a loss or a profit. The researchers felt that respondents might be hesitant if asked direct questions pertaining to their profitability. There appears to be a similarity among responses. While 37% said "yes" to value-added services meeting their revenue expectations, 35% said "somewhat." It is assumed that respondents referred to "somewhat" as the revenue that was expected, but not entirely received.

6c. What is the primary benefit your company receives from offering these services?
Most respondents selected more than one option as a primary benefit. As such, there appeared to be some consistency in the data. A better value proposition (68.6%), followed by a stronger competitive position (66.7%), and recognition as a service provider (62.5%) were the most selected benefits. Differentiation (58.3%) and profitability (47.9%) followed.

7c. What is the primary benefit your customer receives from these services?
It is important to note is that the options selected as customer benefits were truly what the company perceives to be the benefits they offer to their customers. As such it is not necessarily a true reflection of what the customer might perceive as a benefit. One-stop-shopping (70.8%) was the primary customer benefit offered, followed by saving time (58.3%), cost reduction (50.0%), customer retention (45.8%), and consulting (36.9%).

8c. How do you charge your customer for the value-added services your company provides? (see Figure 6)
This question offered respondents the choice of three options: fixed fee, variable fee (fee depending on the job that needs to be done), and hybrid fee (a combination of fixed fee and variable fee). Fifty-eight percent charged a

hybrid fee, while 29.2% charged a variable fee. An insignificant percentage (4.9%) of respondents charged a fixed fee. Respondents that selected the "other" option suggested that they use an all-inclusive price structure or usually custom-quote their jobs.

Section D. Fulfillment Services

1d. Does your company offer any fulfillment services? If no, go to section E.
Based on the input from the pilot survey, fulfillment was defined as "the ordering, sorting, managing, assembly and dispersion of product through activities such as kitting, providing personalized customer packages of a product, or multiple product." Of those responding to this question, the majority (58%) work for companies that offer fulfillment services.

2d. If yes, what types of fulfillment services are offered? (see Table 4)
Cummings and Gallagher (2003) suggest that there are three basic types of fulfillment: literature, product, and Internet. Additionally, respondents from the pilot survey indicated that kitting was a primary fulfillment service offered. There was a fairly even distribution of fulfillment services offered, though product and kitting fulfillment were the most common. Since respondents were allowed to select all applicable responses, it is probable that the respondents' companies offer multiple fulfillment services. The majority of those offering each of the specified fulfillment services do so internally as opposed to outsourcing to a third party vendor.

3d. Are the fulfillment services that your company offer meeting revenue expectations? (see Figure 7)
While 21% of the respondents indicated that the fulfillment services offered by their companies were meeting revenue expectations, 42% elected not to respond to this question. Additionally, 25% indicated that fulfillment services were "somewhat" meeting revenue expectations and 6% responded that they were "not sure" if revenue expectations were being met. Only 6% indicated that the services were not meeting revenue expectations.
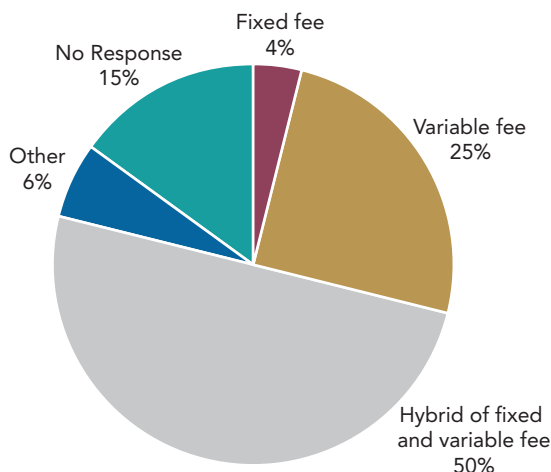
Figure 6. Customer Charge for Value-Added Services

Service	In-house	Outsource
Internet	23%	2%
Kitting	31%	2%
Literature	25%	4%
Product	33%	6%
Other	8%	0%

Table 4. In-House vs. Outsource Fulfillment
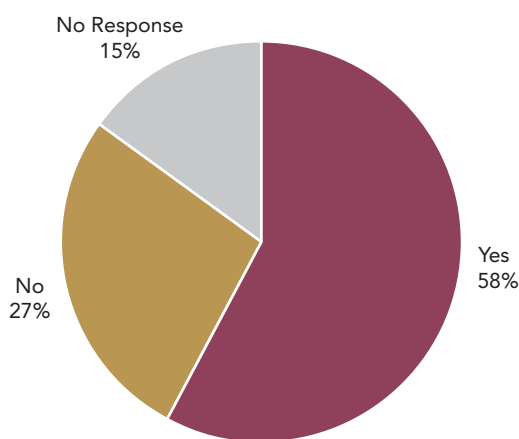
Figure 7. Fulfillment Meeting Revenue Expectations

Section E. Comments

1e. Does your company see finishing and distribution as a growth opportunity in the future? If yes, how?

All of those that responded to this question believed that finishing and distribution is a growth opportunity in the future (10 people did not respond). Digital printing appears to be a driver that will demand instant delivery into the market. Consequently, as the demand for digital printing increases, so will the demand for finishing and distribution. The majority of the respondents claimed that they are prone to offer customers a one-stop-shopping experience by integrating automated finishing and distribution processes into their workflow in order to decrease lead times and improve the service offered. In addition, by offering finishing and distribution services, they will attract new customers as well as retain old ones.

2e. What value-added services do you see your company offering in the future?

Fulfillment, finishing, distribution, and mailing were the most common services that respondents foresee their companies offering. A similar trend appeared in all responses. As one respondent summarized:

> More complete automated services, from design, the Internet, database management, image bank, e-commerce through to more intense variable data printing services and finishing/distribution or presentation of the product in the market place. We believe there will be a blurring of the lines between marketing and graphic arts production services that will draw 'commercial printers' into making marketing decisions for delivering 'critical' information or messages to the marketplace. The time to market this information will depend on whether or not companies can produce, package and present information in the marketplace using various media very efficiently and effectively.

In other words, companies will continue to offer value-added services in terms of market driven solutions focused more on an automated workflow.

3e. In order to remain competitive will more printing companies diversify their businesses by offering value-added services? Explain your response.

Almost 98% of respondents agreed that in order to remain competitive, printing companies will have to diversify their businesses by offering value-added services. Respondents suggested that there are numerous reasons for this trend. In order to survive and remain competitive, companies will have to diversify. Offering value-added services will be driven by customer-demand. Customer loyalty is no longer in the equation. It is obvious that the printing industry is overwhelmed with excess capacity at the moment and is shrinking in size. Print volume is decreasing as increasing electronic communications impacts the printing industry. Larger companies are able to make the necessary investments required in order to diversify and remain competitive. However, smaller companies that cannot afford the learning curve and investment will have to see the advantage of merging with larger print providers in order to survive.

Summary of Findings

The primary research objectives for this project were:

1. To clearly understand the changing business dynamics in the printing industry.

2. To build on a previous RIT Printing Industry Center research study, which identified the nature and variety of services offered by digital and traditional printers (Pellow & Sorce, 2003).

3. To identify current and future trends in finishing, fulfillment, and distribution services.

4. To determine:
   a. the degree to which fulfillment is offered as a value-added service
   b. the types of fulfillment services that are typically offered, and
   c. whether companies that offer this service are realizing a profit.

5. To add to the current base of research on the topic.

The following discussion provides a comparison of the research findings to the defined research objectives. Additionally, several other key findings emerged from this research, which will provide a significant foundation upon which to build an agenda for future research.

CHANGING BUSINESS DYNAMICS IN THE PRINTING INDUSTRY

Business Strategy

The research data suggests that there is an apparent shift in the printing industry away from the traditional commercial printing company to organizations that offer conventional printing along with a range of non-printing services. This diversification strategy, according to respondents from the *NAPL 2003 State of the Industry Survey* (Paparozzi, 2003), is an "advance from provider of a commodity to provider of communications solutions by getting involved in clients' jobs earlier, staying involved longer, and satisfying a broader range of their communications."

Approximately 42% of the survey respondents characterize their business type as "full service provider." For the purposes of this research a full service provider is defined as a company that provides a complete range of production services that begin with prepress and continue through to distribution.

Demographics

The majority (57%) of the respondents were employed by companies with more than 100 employees—17% at companies with 101-200 employees and 40% at for companies with 200 or more. Additionally, more than 90% of the respondents have been employed in the printing industry 11+ years and 50% are in senior management positions. These demographics suggest that the number of small printing companies are decreasing and support the increasing trend of mergers, acquisitions, and business closings.

CURRENT AND FUTURE TRENDS IN FINISHING, DISTRIBUTION AND FULFILLMENT

Current Trends

It is not surprising that binding, folding, gluing, and stitching were the primary finishing services that the respondents' companies offer. It is clear that standard finishing services are generally not outsourced, whereas specialty finishing services such as die-cutting, embossing, and foil stamping are outsourced more frequently. Respondents reported significant improvements in finishing, finishing management, and distribution as compared to 10 years ago. Significant improvements were noted in the areas of automation, cost reduction, productivity, empowerment, and training. Perhaps this is an indication that the importance of the finishing operation is being recognized.

Future Trends

A majority of respondents (79%) indicated that they believe that there are opportunities for growth in finishing and distribution. One commented: "I believe the trend of bindery expansion and diversification into mail, fulfillment, and warehousing by printing companies will continue." Eighty-three percent of the respondents indicated that in order for printing companies to remain competitive they would have to diversify by offering value-added services.

FULFILLMENT

It appears that fulfillment is regularly offered as a value-added service. Fifty-eight percent of all respondents offer some type of fulfillment service. Product fulfillment was reported at a slightly higher percentage than Internet, kitting, literature and other.

The outcome of this research does not clearly answer he question of whether companies are realizing a profit from fulfillment. We can only speculate based on the responses given. It is significant to note that 42% of the respondents did not answer this question. Of the 21% that responded "yes" and the 25% that responded "somewhat," it is not clear whether meeting

revenue expectations implies profitability. These positive responses could mean that if break-even or minimal profit loss was projected, then revenue expectations were met. Subsequently, the data does suggest that 46% of the respondents are experiencing positive trends with relation to the profitability goals associated with offering this value-added service.

The NAPL *Survey of Fulfillment Practices* (2004) reports that for approximately 72% of the respondents overall and at least 61% in every company-size category, print volume has increased from clients receiving fulfillment services. Additionally, 75% overall and at least 65% in every company-size category reported that client profitability has improved as a result of offering fulfillment services. The data from this report did not, however, show whether the fulfillment operation or service alone was profitable.

OTHER KEY RESEARCH FINDINGS

Due to the two different sample populations we used (databases of Finishing Resources Inc., primarily composed of commercial printers and trade finishers, and Binding Industries of America, primarily made up of trade finishers and equipment suppliers), the majority of the respondents that selected "other" for the type of business were equipment suppliers. More than 50% of the respondents were senior managers (presidents, vice presidents, and directors) with more than 11 years of experience in the industry. This validates the evaluation of the past 10 years, based on the fact that the respondents are experienced and familiar with the printing industry.

Over 70% of the companies we surveyed employed more than 50 people, reflecting the current trend in the industry. More small companies are merging with large companies in order to survive. Similarly, large companies are acquiring small companies with the intentions of offering a greater variety of services. This trend is supported by our results: 29% of respondents have adopted in-house development as the primary strategy for implementing value-added services, which are rarely

outsourced. Some companies use more than one strategy to implement value-added services.

Most companies have actually been offering value-added services for over 10 years. The terminology "value-added services" is new, but the concept has been around for years. By providing these services, a company is able to distinguish itself from competitors.

The monetary repercussions of implementing and providing value-added services are still unclear. Although the survey asked respondents whether revenue expectations were being met, it is unclear how they interpreted the term "revenue expectations." It could have meant break-even, sustained growth, minimal, increased revenues, or even loss. It is also unclear at which stage of implementation the revenue expectations were met. Forty-two percent of respondents did not respond to fulfillment meeting revenue expectations, while 13% did not respond to value-added services meeting revenue expectations. These percentages were higher than expected, especially considering the demographic profile of the sample.

The value-added services list provided to respondents were based on the latest trends within the industry. Consequently, most of the services listed were technology-based. However, value-added services are not limited to the list provided. Some people might perceive prepress as a value-added service. Industry trends suggest that as more companies offer value-added services, those value-added services themselves will commoditize. Consequently, new "value-added services" will need to be developed and offered in order to sustain competitiveness.

Current industry research suggests that fulfillment is the number one value-added service being offered. However, based on our survey, e-commerce (71%) was the number one service currently being offered, followed by fulfillment. Finishing and distribution is an important aspect of the workflow that has been around for years. However, it has only recently been considered an important value-added service. Basic finishing is being offered in-house, but specialized finishing processes such as embossing and foiling are still largely being outsourced.

Conclusion

Printers can no longer hope for a rise in profits as the economy prospers, because growth trends in the economy no longer coincide with printing industry growth. Vigorous competition and vagaries of the economic climate are forcing companies to adopt value-added strategies that will help them distinguish themselves from their competitors. Since implementing such strategies generally requires large investments, most small companies are merging with large companies in order to survive while large companies are acquiring small companies that serve niche markets. Consequently the printing industry is shrinking. Adding value is one of those buzz phrases, like the now ubiquitous "solutions provider" that has numerous meanings and can be misused at times. Although most companies are aware of the "service-oriented" trend, few have successfully managed to implement value-added services as an integrated solution. However, it is something that all printers are being forced to do in order to gain and retain customers in a market where print has become merely a commodity.

Companies are trying to offer customers a one-stop-shopping service. In doing so, many specialty services are being brought in-house. Services such as finishing and distribution that were previously considered an afterthought are now being seen as value-added services. Fulfillment is currently considered the top value-added service in the industry. In addition, technology-based services are improving efficiencies and forcing companies to change their business models. Based on the research gathered, e-commerce is the top value-added service being offered in-house. Other technology-based value-added services include data asset management, variable data printing, and web-to-print.

As companies continually develop and discover methods and services that will help distinguish them from their competitors, a standard business model is yet to be discovered and implemented. Price increases in raw materials such as inks and substrates, and increasingly demanding customers are forcing companies to re-evaluate their business models. How should companies charge customers for services that are being offered? According to Carson (2001), adding value is the key to developing long-term partnerships that will be positive for printer and customer alike. Companies need to think more scientifically and see themselves as "one with their clients," providing solutions rather than products.

AN AGENDA FOR FUTURE RESEARCH

The following topics emerged as opportunities for further research:

1. **Profitability**
   It is not clear whether the positive revenue expectations of our respondents meant that fulfillment or other value-added services were more profitable. The next phase of this research may attempt to determine the true profitability generated from a specific value-added service. Additionally, it is important to determine whether the services that are offered are separate business units or cost centers. Are the value-added services offered as a temporary or bundled service or one that is strategically implemented?

2. **Marketing Strategy**
   Another area of interest associated with the strategic implementation of value-added services is whether or

Conclusion

not companies have designed formal marketing programs/strategies to promote this capability.

3. **Distribution Workflow**
   Focused research on distribution in the printing industry is needed. During the secondary research process, it was discovered that limited information has been published on the topic of distribution workflow within the printing environment.

Research on physical distribution (workflow, trends, challenges, internal, external) and the impact of electronic distribution (distribute-and-print) and print-on-demand on traditional print distribution operations would be beneficial.

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Appendix

The full survey results are listed in the following table, in the order in which they were asked. A total of 48 responses were received. Open-ended questions, along with the responses provided for "other" are discussed in the monograph survey results discussion.

Questions	Total (n=48)	
Section A- Demographic Profile		
1a. Type of Business (multiple responses allowed)		
Prepress	29.20%	
Printer- Conventional	37.50%	
Printer- Digital	27.10%	
Finishing	64.60%	
Fulfillment	31.30%	
Full service print provider	41.70%	
In-plant	18.80%	
Other	29.20%	
2a. Markets Served by Business (multiple responses allowed)		
Commercial printing (catalogs, newspapers and magazines)	64.60%	
Forms & labels	27.10%	
Packaging (flexible and rigid containers)	22.90%	
Mailing services	47.90%	
Trade services (bindery, finishing and distribution)	52.10%	
Other	4.20%	
3a. Number of Employees at Business Location		
Fewer than 20	11.10%	
21-50	11.10%	
51-100	17.70%	
101-200	17.70%	
200 +	42.20%	
Non-responses	3	

Appendix

4a. Your Job Title/Position		
President/CEO	30.20%	
Vice president	20.90%	
Director	7.00%	
Production manager	4.70%	
Finishing supervisor	9.30%	
Other	27.90%	
Non-responses	5	

5a. Years Employed in the Printing Industry		
Fewer than 2 years	2.20%	
2-5 years	0%	
6-10 years	2.20%	
11-16 years	13.30%	
Over 16 years	82.20%	
Non-responses	3	

Section B- Industry Business Trends in Finishing & Distribution		

1b. What standard finishing services does your company offer? (multiple responses allowed)		
	In-house	Outsourced
Binding	72.90%	4.20%
Die cutting	29.20%	25.00%
Embossing	22.90%	25.00%
Foil stamping	27.10%	25.00%
Folding	56.30%	10.40%
Gluing	56.30%	4.20%
Stitching	58.30%	8.30%
Other	31.30%	2.10%

2b. How have finishing processes improved/evolved in your company over the past 10 years? (check all that apply)		
Automation	87.50%	
Increased productivity	79.20%	
Waste reduction	58.30%	
Other	10.40%	

3b. How has finishing management improved/evolved in your company over the past 10 years? (check all that apply)		
Empowerment	68.80%	
Better project management	56.30%	
Improved hiring/training	58.30%	

Improved communication	66.70%	
Other	4.20%	

4b. How have distribution processes and procedures evolved in your company over the past 10 years. (multiple responses allowed)		
Automation	62.50%	
Increased productivity	58.30%	
Shorter delivery times	75.00%	
Other	2.10%	

Section C. Value-Added Services		

1c. What value-added services does your company offer? (check all that apply)		
	In-house	Outsourced
Consulting	31.30%	4.20%
Data Asset Management	54.20%	2.10%
Distribution	20.80%	0%
E-commerce	70.80%	0%
Finishing	52.10%	4.20%
Fulfillment	54.20%	6.30%
Mailing	25.00%	4.20%
Print on Demand	29.20%	2.10%
Variable Data Printing	22.90%	2.10%
Web to Print	4.20%	0%
Other	6.30%	0%

2c. Why did your company decide to offer these services? (multiple responses allowed)		
Competitive advantage	64.60%	
Requested by customer(s)	54.20%	
Strategic decision	62.50%	
Other	6.30%	

3c. How long has your company offered value-added services?		
Less than 1 year	2.30%	
1-5 years	18.60%	
6-10 years	27.90%	
Over 10 years	51.20%	
Non-responses	5	

4c. What was the primary strategy used to integrate these services into the workflow? (multiple responses allowed)		
Acquisitions	20.80%	
Partnerships/joint ventures	18.80%	
Outsourcing	25.00%	
In-house development	29.20%	
Other	0%	
5c. Are the value-added services that your company offers meeting revenue expectations?		
Yes	42.90%	
No	2.30%	
Somewhat	40.50%	
Not sure	14.30%	
Non-responses	6	
6c. What is the primary benefit(s) that your company receives from offering these services? (multiple responses allowed)		
Differentiation from competitors	58.30%	
Increased company profitability	47.90%	
Increased value proposition to customer	68.60%	
Recognition as a solutions providers	62.50%	
Stronger competitive position	66.70%	
Other	2.10%	
7c. What is the primary benefit your customers receive from these services? (check all that apply)		
Consulting services	39.60%	
Cost reductions	50.00%	
Customer retention	45.80%	
One-stop shopping	70.80%	
Saves time/minimizes frustration	58.30%	
Other	4.20%	
8c. How do you charge for the value-added services?		
Hybrid	58.50%	
Variable	29.20%	
Fixed	4.90%	
Other	7.30%	

Section D- Fulfillment Services		
1d. Does your company offer any fulfillment services? (if no, go to section e)		
Yes	68.30%	
No	31.70%	
Non-responses	7	
2d. If yes, what types of fulfillment services are offered? (n=28)		
	In-house	Outsourced
Internet	22.90%	2.10%
Kitting	31.30%	2.10%
Literature	25.00%	4.20%
Product	33.30%	6.30%
Other	8.30%	0%
3d. Are fulfillment services that your company offers meeting revenue expectations?		
Yes	35.70%	
No	42.90%	
Somewhat	10.70%	
Unsure	10.70%	
Non-responses	20	
Section E- Comments		
1e. Does your company see finishing and distribution as a growth opportunity?		
Yes	100%	
No	0%	
Non-responses	10	
3e. In order to remain competitive will more companies diversify by adding value-added services? (note, 2e is open-ended, so it was not included in this section)		
Yes	97%	
No	3%	
Non-responses	8	

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