

for Affiliates this month in Center research:

## Print Media Distribution

Although all four printing companies participating in a recent Printing Industry Center research study agreed that distribution is an important, if not critical, part of the print production process, none of them had a documented and/or standardized distribution workflow. This month's research monograph, *Print Media Distribution: Process, Profitability and Challenges* (PICRM-2006-01), by RIT Professor Dr. Twyla Cummings and graduate students Maria N. Cummings and Bernice LeMaire, is the second of a three-phase study on the status of distribution in the printing industry.

Distribution involves the movement of finished printed materials from a printing plant to an internal storage location, the customer, a distribution center, or the end user. It is a customer service offering that starts when a job is scheduled. Distribution departments use market expertise to negotiate freight rates, logistics services, and routing. Other aspects of distribution include warehousing, shipping, inventory management, fulfillment, and kit packing.

### Coordinating, Promoting and Implementing Distribution Services

Starting the print production process with a clear understanding of the customer's distribution requirements benefits both the printer and the customer by eliminating problems such as late shipments. One of the four Phase Two participants explained that a requirement for distribution information is embedded in its initial ordering software.

Two of the four firms promote and market their distribution services, and refer to these services on their Web sites. The two companies that do not market distribution services also do not show any profit from providing them. While it was seen that a marginal profit could be realized from select distribution services, it is the opinion of the researchers that this is still a gray area.

Nevertheless, distribution is an important expense, especially for magazine and catalog publishers. R.R. Donnelley, the largest printing company in the U.S., is constantly looking for ways to improve its distribution in order to save customers money. For example, the company implements strategies such as co-palletization (combining materials from different publishers on the same pallets, thus allowing smaller customers to gain the same postal rate savings as larger customers) and drop-shipping (transporting publications closer to their destinations before inserting them into the postal stream, thereby reducing mailing costs and delivery times).

### Center Spotlight

RIT SPM  
2007 Gravure Day  
March 27

9:30 – 4:30 pm, CIMS Room  
2230/2240, RIT Campus

Participants at the Gravure Day activities will:

- Hear presentation from Quad Graphics, Armstrong Industries, Gravure Education Foundation, Hallmark Cards, and National Geographic

- Meet and interact with industry speakers over a sumptuous sit-down luncheon

- Discuss what students need to prepare them for a rewarding career in the gravure industry

This event is free and open to all, but registration is required for the luncheon. To register, email [mxcprr@rit.edu](mailto:mxcprr@rit.edu) or call the RIT SPM office at (585) 475-2728. Registration deadline is March 20, 2007.

More information on this event at [www.rit.edu/~gravure/gravure2007/](http://www.rit.edu/~gravure/gravure2007/).

### The e review

The eReview is a monthly publication of the Printing Industry Center at RIT for registered Affiliate companies. Articles are also published in the quarterly printed publication *PrintReview*.

### Subscriptions

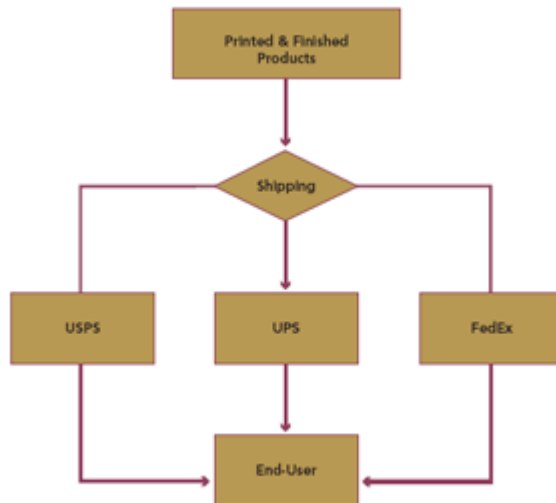
While the Phase Two companies displayed a diversified mix of destination points, customer storage was either the first or second most common destination point for all four participants. Only two of the companies outsourced a small percentage of their distribution functions.

## Distribution Workflows

Because the four participants in Phase Two of the study were reluctant to discuss the specifics of their distribution procedures, follow-up interviews about print distribution were held with companies from Phase One of the study. Six of these companies (two large firms, two mid-sized and two small) explained their distribution systems to the researchers, who then generated a workflow diagram for each. The workflows ranged from very straight-forward and simple representations (Figure 1) to complex, multi-faceted workflow diagrams (Figure 3).

### Figure 1. Distribution workflow for a small digital printing book publisher

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### Figure 2. Distribution workflow for a small digital printer

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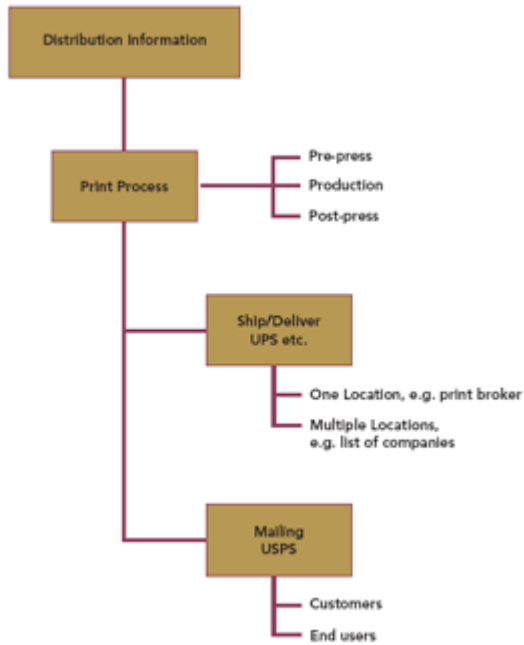
## About the Center

Dedicated to the study of major business environment influences in the printing industry precipitated by new technologies and societal changes, the Printing Industry Center at RIT addresses the concerns of the printing industry through educational outreach and research initiatives.

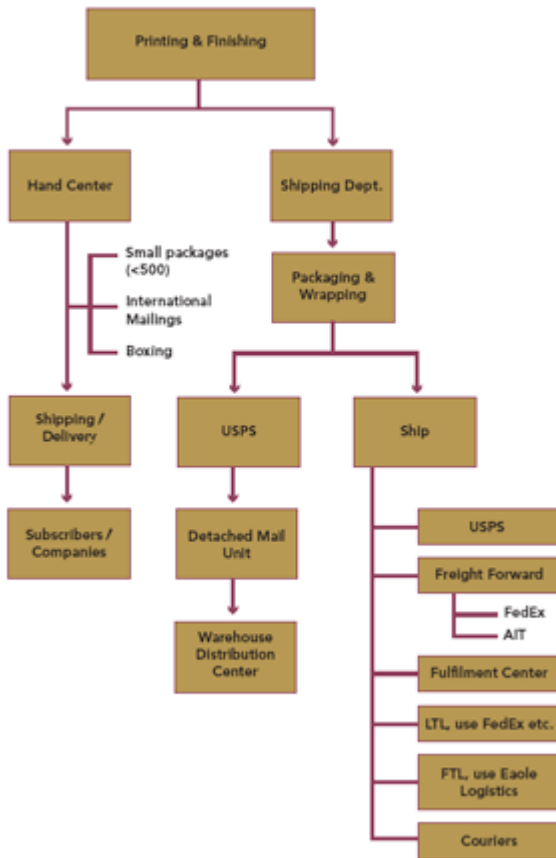
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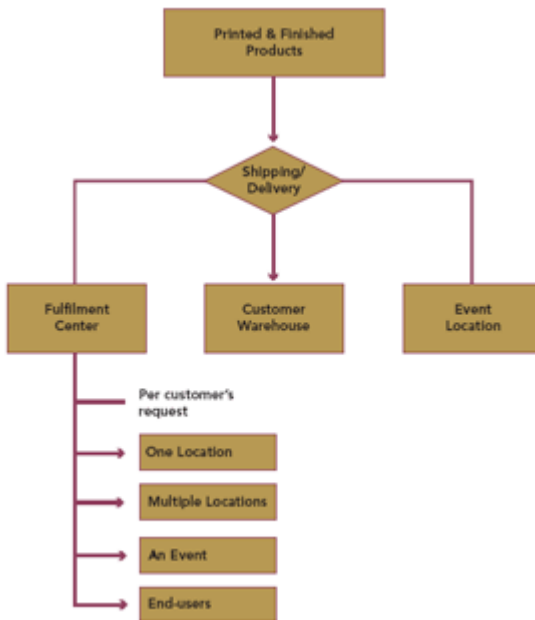
**Figure 3. Distribution workflow for a large commercial publishing printer**  
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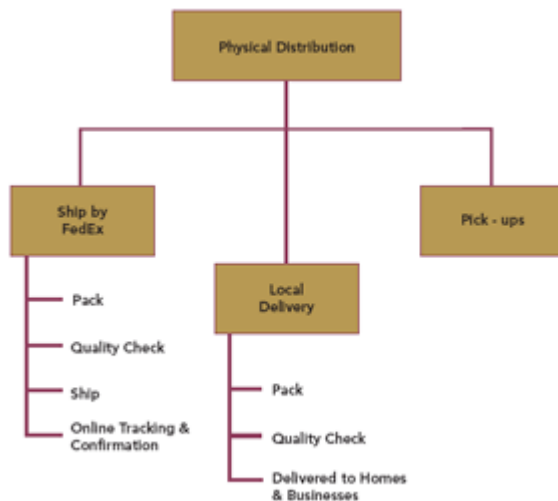
**Figure 4. Distribution workflow for a mid-sized commercial printer**  
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**Figure 5. Distribution workflow for a mid-sized commercial printer with fulfillment center**  
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**Figure 6. Distribution workflow for a large networked printing company**  
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These six diagrams show a correlation between the size of the printer and the complexity of its distribution system. (See [Figures 2 and 4](#).) A core characteristic of all of the participants, as shown especially in [Figures 1 and 2](#), is the prominent use of UPS and the U.S. Postal System (USPS), as well as other shipping carriers, to transport product to their clients and end users. Larger printers tend to offer additional options such as destination shipping, and/or utilize their own trucks for delivery.

There is also a trend among larger printers for more customer involvement and customization in choosing where and how a product is shipped. For example, as shown in [Figure 5](#), customers have the option of having their products shipped to one location, multiple locations, an event, or directly to end users.

### Distribution Challenges

A specific list of distribution challenges (see [Table 1](#)) identified from the Phase One research study was shared with the Phase Two participants. They were then asked whether their companies had encountered any of these challenges and if so what approaches were being taken to resolve them. [Table 1](#) outlines the specific solutions that Phase Two participants have put into place.

In general, the Phase Two participants have addressed space limitations and physical constraints either by expanding or reorganizing current warehousing facilities. Because of increasing fuel costs, the participants have reduced the number of their carriers, negotiated rates with the USPS and third party logistics firms, or started charging clients for these increased costs. The education of customers is also an area of concern to the participants.

#### **Table 1. Key distribution challenges and solutions**

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Challenge	Solutions			
	Company 1	Company 2	Company 3	Company 4
Storage and warehousing	Re-rack & reorganize warehouse.	Ensure adequate space.	Ensure adequate space, understand costs, invoice customers.	Securing off-site space, and building an expansion to existing structure.
Profitability	n/a	n/a	Timely customer invoicing.	n/a
Customer information flow	Shorten lead times.	Acclimate & educate internal & external customers.	n/a	Make technology investment into SECAP*
Fuel surcharges	Reduced # of carriers, negotiated for 1998 rates, & capped surcharges.	Customer not charged for increased surcharges.	Invoice the customer for increased charges.	Negotiating w/ 3rd party logistics firms for better rates.
Postage	n/a	n/a	Incorporate postage checks and permits.	Work closely with USPS.
Trucking	Uses four customer-designed carriers for 85% of shipments.	n/a	Establish better pick-up and delivery timing.	n/a
Automation	n/a	n/a	n/a	Set up in-line boxes in the bindery.
Customer service	n/a	n/a	n/a	Employee training & more technology enhancements.
Timing and scheduling	Warehouse revisions and shipping FTL (60%) & LTL (40%).	n/a	Establish better cycle times.	Training/scheduling of employees, better management practices.
Employment (hiring/retention)	n/a	n/a	n/a	More extensive interviewing, reference checks.

\*SECAP is a proprietary mailing software program developed and used by this company.

## Conclusions

Cost savings and the prevalence of limited resources are common themes among printers, regardless of size. The lack of qualified distribution carriers may result in more printers focusing on strategic partnerships with logistics firms in order to maximize efficiency. Continuing to build upon current technology for fulfillment processes, and purchasing new equipment such as RFID technology, also appear to be common themes.

Having an established IT management function to support evolving distribution operations becomes especially important for companies planning to incorporate in-house fulfillment services. One interviewee noted that e-distribution will become more important in the future. According to this participant, the “distribute-and-print” model will save money and provide increased revenue opportunities.

The third phase of this research project will involve publishing a book on the subject of print media distribution.

## 2006 Research Monographs:

To read about this research in detail, download the monograph from: <http://print.rit.edu/pubs/picrm200601.pdf>

Research publications of the Center are available at: <http://print.rit.edu/research/>

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