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Strategic Assessment

HP Indigo Customers Innovate with Production Color Digital Print in Asia

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Abstract

Over the past few years, InfoTrends analysts have been paying increasing attention to the Asian market and tracking the success of production color digital printing market there. At the invitation of HP, we conducted interviews with Indigo customers from four countries: China, India, Japan, and South Korea. These customers are innovators in digital print. Their experiences provide unique insight into the use of production color digital print in Asia.

For More Information

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Introduction

Asia has always been a major center of culture and commerce. However, the stature and importance of the region to the global economy has become particularly notable in the last decade, as a combination of technological innovation and economic achievement has catapulted many of the nations in the region to newfound prominence.

One example of this has been the emergence of Asia as the world's workshop. Consider the growth of volume and sophistication in manufacturing in China alone, for example – by some estimates, Chinese companies have completed the construction of 50,000 factories in the last two decades. The products being produced in these factories are of increasing sophistication and quality. China no longer produces only simple products such as injection-molded toys, but has become a global production hub for some of the most sophisticated manufactured products sold around the world – from iPods to Mercedes-Benz automobiles.

In South Korea, facilities by Samsung, Hyundai and LG develop and produce some of the world's most advanced semiconductors, mobile phones, and technology products. Japan has long been renowned for its quality engineered cameras, automobiles, and personal technology products. In India, a young and vibrant manufacturing economy is producing indigenously-designed products including the world's lowest-cost automobile.

Economic output is not only measured by products, but also services and intangibles, and here, Asia is also an increasingly important part of the economy. Bollywood movies are enjoyed not only by audiences in Madras, Mumbai and Delhi, but also viewers in London, New York and Buenos Aires. Japan's considerable output in animation and film are enjoyed by audiences around the globe. Software engineers

in the development parks of India, China and South Korea are developing crucial software systems for indigenous and global companies. Technical support facilities throughout the region are available at a moment's notice to provide consumer support to customers around the world.

As a result of this explosion of economic activity and innovation, consumers worldwide have become familiar with stalwart brands from the region, such as Sony, Samsung, Canon, and Toyota – and are also becoming familiar with up-and-coming brands such as Hyundai, Haier and Tata.

The Asia-Pacific region is not only notable for its exported economic products, but also for its burgeoning internal market of sophisticated and high-income consumers. Asian consumers are spending increasing proportions of their growing incomes on high-tech products and conveniences, and the local market has responded through a massive burst of innovation. In South Korea, the entire country is blanketed with one of the world's most advanced wireless mobile communications networks, making low-cost, high-speed data and voice services available to consumers. In China, automakers including General Motors, SAIC, Volkswagen, and Chrysler are struggling to meet insatiable consumer demand for automobiles. Indian consumers are spending their newfound wealth and growing incomes on condominium apartments in high-tech planned communities that offer advanced high-speed telecommunications services and luxury amenities standard.

With the Asian market going through such a profound transformation and explosive growth, InfoTrends decided to examine the impact of these developments on print service providers in the region – with a focus on how local print service providers are adopting the power of digital print to meet the demands of an increasingly sophisticated, complex and evolving market. We traveled to Asia to interview print service providers on the progress of their business and how digital printing has enabled their evolution and improved their profitability.

One major player in the global market who has invested significant resources in the region is Hewlett-Packard's Indigo group. This white paper will examine HP's investments in the region, as well as the activities of print service providers employing HP infrastructure to deliver advanced document services to local, national, regional and global companies that are active in the Asia-Pacific region.

Building a Center Of Excellence

In July of 2007, HP opened what it called a "Center of Excellence" in Singapore, its headquarters in the Asia-Pacific region. A \$10 million (U.S.) investment, the 12,000 square foot facility is a showcase of HP's capabilities in commercial printing, photo specialty printing, direct mail, label converting/specialty printing, and finishing. The facility is also used as a training center and showcase for digital printing applications.

HP has made this large investment in the region due to its desire to continue its strong growth in the global market, which includes not only the opening of the Asia-Pacific Center of Excellence, but also the opening of a new ink manufacturing plant and 80% global growth in direct sales personnel in 2007. According to Alon Bar-Shany, HP Indigo's Vice President and General Manager, HP is the fastest growing graphics company in the world and holds the top position in digital presses, digital labels, and large format technical printers. 10 billion impressions were printed on Indigo presses in 2006, representing a 40% increase in page volume that carried into 2007.

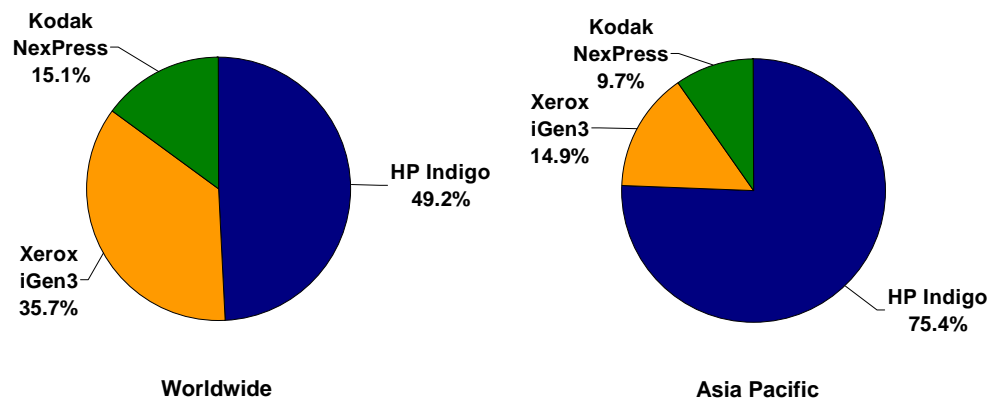
Asia-Pacific is now the fastest growing market for HP's Graphic Arts business, with the Indigo business growing by over 40% annually. HP is also a major investor in the region. In all of Asia-Pacific (including Japan), the company employs 40,000 employees across 157 offices, 640 service centers, 26 solution centers, 10 manufacturing plants, 6 research and development facilities, and 3 HP Labs facilities (in India, Japan, and China). This level of presence and investment in the market has given the company a significant edge in gaining early entry in many of the region's economies.

VS Hariharan, HP's Vice President of Graphic Arts in Asia Pacific, says "The digital revolution in Asia has arrived. HP plans to lead the market by investing in key regional assets at a faster rate than the market itself, building a passionate sales and service team, and investing in partnerships to deliver end-to-end solutions."

Production Color Market Growth

Looking at the production color digital cut-sheet printer market, HP Indigo has taken a position of leadership in terms of annual unit placements. Consider the 1 million + duty cycle category. In 2006, HP Indigo placed 649 units of the 1,394 total, giving them around 47% market share worldwide. Preliminary numbers available for 2007 indicate an overall growing market and an improvement in HP Indigo share. Based on these preliminary 2007 figures, HP Indigo placed 757 units of the 1,540 total, increasing their worldwide market share to 49.2%.

Figure 1: 2007 Production Color 1 Million + Duty Cycle Cut-Sheet Printer Unit Placements Worldwide (left) and in Asia Pacific (right)



Source: InfoTrends Quarterly Tracking Program (preliminary data)

Asia Pacific represents a growing opportunity for the production color market. Asia Pacific accounted for 9.6% of the total worldwide production color 1 million + duty cycle products in 2006. In 2007 that number grew to 11.4%. HP Indigo has an even stronger market share position in Asia Pacific. In 2007 InfoTrends estimates that it had 75.4% market share in Asia Pacific.

The Advantages of Digital Print

One of the most notable things about the Asian economy is the large variance in the business practices, goals and strategic approaches of print service providers in different markets. However, when talking about what Indigo delivers to their businesses, a number of common themes emerge. These include:

- **Flexibility:** Print service providers consistently note the flexibility that digital print on Indigo delivers to their businesses. Economical short-run capabilities allow them to produce a large variety of document types, to customer specifications, in a short period of time, in a non-disruptive fashion.
- **Quality:** HP Indigo is widely praised for the quality of its output across countries. Quality is often defined differently based on market or application, with a focus ranging from resolution to the crispness of text to color quality, but across all of those metrics, print service providers view the print quality of the HP Indigo products as superior to other forms of digital color output, with some even comparing it favorably with offset quality – especially in specialized applications such as photo production.
- **Speed to market:** By using digital production technologies and a super-efficient workflow, many print service providers report that they are able to deliver documents much faster than more traditional forms of offset production.
- **New business opportunities:** A number of print service providers have entered entirely new lines of business – or created them from scratch – as a result of the new applications that Indigo digital print capabilities enable.
- **Reliability:** Many countries in the region have limited digital production capacity, resulting in production printers that have very high levels of utilization that sometimes approach “24/7.” Several print service providers commented favorably on the uptime reliability of the Indigo press, allowing them to better fulfill orders from customers.
- **Integration into existing workflows:** Several print service providers had multiple sites across the country, with a few employing sites outside of their home countries. Indigo infrastructure integrated well into their existing production workflows and enabled remote operation, scheduling, and accounting – in short, the integration of multiple remote sites into a single, unified workflow to create a “virtual digital print factory.”
- **Competitive advantage:** In situations where the primary competition was offset printers, the speed-to-market, quality and flexibility of the Indigo press delivered significant differentiation to print service providers. In situations where other digital print providers employed competing solutions, print service providers expressed a consistent belief that Indigo’s reliability and print output quality gave them a noticeable edge in the marketplace.

Most business owners/managers were also very consistent in the ongoing benefits they hope to derive from Indigo production print infrastructure moving forward. These include sustained differentiation in the marketplace, new business models (including the production of new types of high quality, highly-

customized variable documents such as photo yearbooks), and increased satisfaction from longtime customers due to the flexibility and fast turnaround that the infrastructure offers to them.

In many of the countries within the region, HP is one of a limited number of competitors due to the emergent nature of many of those markets. In South Korea, for instance, many print service providers only regarded HP, Océ, and Xerox as credible competitors in the marketplace, with other players being viewed as too small to provide the support necessary for a professional-grade print service provider. In these situations, HP appears to have significant perceived advantages in quality, customer support and application enablement. These perceptions have often led to HP supplementing or even displacing digital production print solutions from competitive vendors.

The Indigo brand has also become known to print service providers' customers in several circumstances due to the quality of output. With digital print being an emerging opportunity in many countries in Asia, HP's output is often regarded as notably higher quality. In these situations, some print service providers have reported that customers ask for Indigo by name, or request that certain jobs be "Indigo only." This is relatively unusual in other markets, where customers often don't know (or care) what devices are used to produce printed output. This trend in Asia-Pacific suggests that HP is uniquely well-positioned for further growth in the marketplace, and underscores the advantages that early entry into a market can provide.

Case Studies

For most print service providers, InfoTrends conducted an on-site visit, including a tour of the production facility itself. In some circumstances, we were unable to arrange an on-site visit and instead conducted our interviews via telephone.

We interviewed HP Indigo sites in South Korea, Japan, China, and India, across a wide range of applications. Print service providers also were wide-ranging in their experience with Indio, ranging from over a year to being relatively new sites that had only employed Indigo print infrastructure for a few weeks. This gave us a sense not only of the capabilities of the infrastructure itself, but also a sense of the evolution of how Indigo digital print gets employed in Asian print service providers over time.

Table 1: A Summary of the Print Service Providers Interviewed for this Report

Country	Print Service Provider	Infrastructure	Applications
China	China Post	HP Indigo 3050 (3) HP Indigo 3500 (6) HP Indigo 5000 (1) HP Indigo 5500 (6)	Personalized postage stamps Personalized greeting cards
	QL Art	HP Indigo 5000 (1)	Short-run print jobs Color and customized print jobs
India	Thomson Press	HP Indigo 3050 (1) HP Indigo 5500 (1)	Book publishing High quality custom print
Japan	Shiryo-Micro	HP Indigo 5000 (1) HP Indigo 5500 (1)	Business cards Highly customized print applications for demanding consumers
South Korea	KSI	HP Indigo 5000 (3) HP Indigo S2000 (1)	Books on demand Photo finishing Variable data
	Heung Ji Won, Ltd.	HP Indigo WS4500 (1)	Custom labels on demand Variable data

China

China Post Group – Postage Stamp Printing Bureau

Locations: Bureaus throughout China; 2 production plants in Beijing

Employees: 1,000

Highlights

- Indigo is employed to produce customized postage stamps, greeting cards, and Olympic promotional materials
- 20 million color A3 pages produced digitally in 2007
- Digital printing contributes about 10% of total document revenues
- Annual growth expected to be between 100% and 200%
- Leased six Indigo production printers at the end of 2007 to keep up with demand
- Future-looking plans include the creation of a direct mail service bureau for the Chinese market

Figure 2: China Post Group



Mr. Wang Liang, director of Production at China Post's Postage Stamp Print bureau, is bullish on the future of digital print within China. "The growth of digital printing in China is tremendous," he notes. "For us, digital volume in 2007 increased by 200% and we expect it to increase at between 100% and 200% for the foreseeable future on a yearly basis."

What is driving this tremendous growth? The power of personalization. China Post has built a significant business for itself in the production of two types of document – personalized postage stamps, and personalized greeting cards. These two lines of business are seeing tremendous increases in growth throughout China, and as awareness of the capabilities has grown, so has demand. China Post's 1 million

salespeople across China have created tremendous awareness of the customized postage and greeting opportunity and consumers have responded at unprecedented levels.

These jobs, printed in color, amount to over 99% of the total digital print demand at China Post's operation. The demand has resulted in significant investments in Indigo digital color production printers, including the purchase of four Indigos since 2002 and a further lease of six Indigos at the end of 2007 to keep up with soaring demand.

When thinking about why China Post has invested in the HP Indigo, Mr. Wang first cites HP's support. "HP has spared no efforts in helping us with the digital business," he says. "From equipment support and service to training and technical support on-site during peak periods, HP has delivered."

HP's success with Indigo in international markets was a major driver for China Post's decision to use Indigo production printers to drive the rapidly growing customized stamp and greeting card business. "HP was proactive in inviting us to visit Indigo sites abroad," notes Mr. Wang.

This has resulted in a high level of utilization of the existing digital production infrastructure. At peak times, each machine prints between 1.5 and 2 million impressions in a given month with a high degree of reliability. Mr. Wang expects that growth in demand will continue at these levels, and also notes that China Post is developing new business lines to expand beyond the customized stamp and greeting card market, to take advantage of the continued strong growth in China.

"The quality of Indigo is outstanding," contends Mr. Wang. "When compared to other digital presses, the HP Indigo appears to be offset quality."

China Post also rates the speed and reliability of the device as very high, especially in comparison with competitors' offerings. This has been crucial to its success and growth in the peak demand season around Chinese holidays (particularly at the end of the year). Digital production printers have been crucial to allowing China Post to deliver both against those massive peak volumes, while also maintaining a profitable business in short-run during slower months of the year when demand is much lower.

Looking forward to the future, China Post wishes to begin offering direct mail integrated services to business customers using digital production capabilities, and expects this to be a major growth market as well. The company has been examining this opportunity and the necessary infrastructure requirements and plans to launch the line of business soon.

The firm also expects the Internet to be a major sales channel for personalized printed materials. Since short runs are usually priced relatively low, a direct sales model through the Internet is viewed as the highest margin alternative for personalized jobs where dedicated salespeople may be uneconomical.

With meteoric growth in demand in the world's most populous country, China Post is setting the standard for how to meet peak production requirements and fulfill highly customized short-run jobs in a customer-centric production environment.

"The growth of digital printing in China is tremendous. For us, digital volume increased by 200%."
– Wang Liang,
Director of Production

QL Art

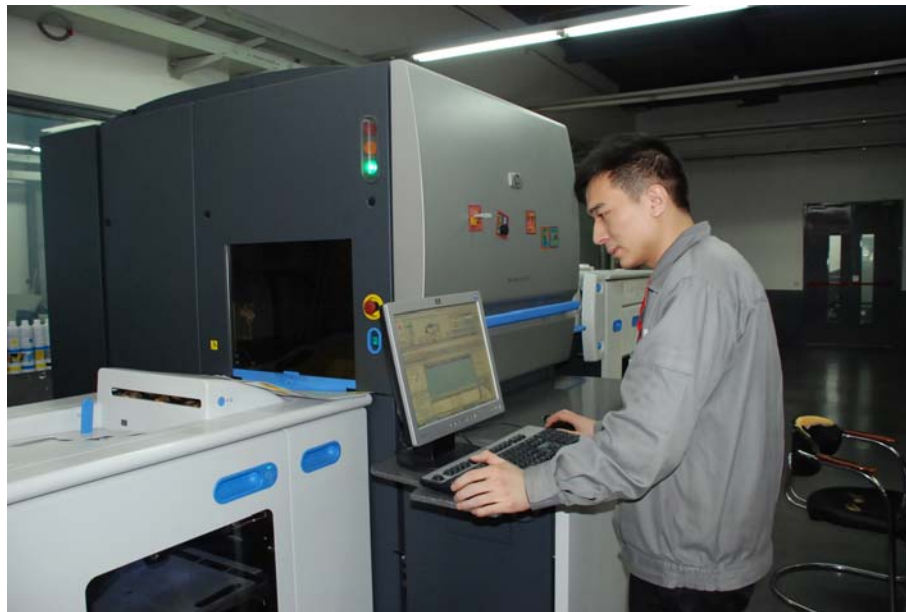
Locations: Beijing, China; Xian, China

Employees: 180

Highlights

- Founded in 1995 as a spot-color offset printing organization
- Acquired Indigo 5000 in August 2007; monthly impressions are already at 400,000
- Utilizes Indigo primarily for short runs and to supplement offset printing business
- Black & white volume on the Indigo is approximately 10% of total volume
- 60% to 70% of business are booklets and brochures for government or commercial organizations

Figure 3: QL Art



Mr. Bo Qi, cofounder of QL Art, is a believer in the integration of digital production print into a conventional offset workflow to gain flexibility for smaller-run jobs. “For jobs under 1000 copies, digital printing is the best choice.”

On the offset side, the company employs seven Heidelberg sheet-fed presses, split between its Beijing and Xian facilities. In Beijing, it has three four-page and two two-page offset presses, while the Xian facility has two four-color offset presses.

Faced with increasing demands for short-run work, the firm opted to purchase its first digital production printer, an Indigo 5000, in April of 2007. Since that time, the firm has been keeping the device busy with an average of 400,000 impressions per month – mostly of short-run work.

Looking forward to the future, the company wants to expand the reach that digital has within its own enterprise and also in customer enterprises. It has begun examining more complex variable data printing and 1:1 communications opportunities, but desires a detailed business plan to invest in those applications. It has also developed a Web-to-print application which has been reasonably successful, but which doesn't differentiate the firm as much as it had hoped.

QL did not take its decision to invest in digital production print lightly. It has been aware of the opportunity since 2002 and began investigating the opportunity almost immediately upon learning of it. At the time, few solutions existed that were suitable for the firm's mix of business – it wasn't until 2006 that it found the solution that it was searching for in the form of the Indigo 5000.

"We had to invest in the equipment to get the opportunity," says Mr. Bo. "We have had lots of business, for years that was suited more for digital than offset." Thus, the addition of the Indigo allowed that short-run work to switch to digital, freeing up significant resources.

The firm ranks its digital business in order of focus as first, short runs; then custom applications; then color; and finally, variable data. While it has not yet developed sophisticated capabilities in the variable data side of the market, it recognizes the opportunity and is planning accordingly.

However, QL believes that it is one of the most skilled operators of digital print in China today when it comes to color, due to its long heritage of producing high-quality offset color documents in the years prior to acquiring the Indigo. "It is our core competence," says Mr. Zhu Guoliang, another of the company's co-founders. "Education is key – we work hard to educate clients and end customers about how digital printing should work and when it should be used."

QL chose Indigo because its quality was similar to its existing offset equipment, making it a natural fit and a familiar level of output quality for its longtime customers. That quality, it believes, is unmatched by other digital production printers on the market today.

QL chose Indigo because its quality was similar to its existing offset equipment, making it a natural fit.

The firm also ranks HP's support highly and notes that HP has been proactive in providing training, business development seminars, and support ever since installing the equipment. "This was an important part of our due diligence process," says Mr. Bo. "We examined stacks of information and specifications about machines, but support and partnership were also important to us. HP was unmatched in this regard."

Looking forward to the future, QL plans to increase the utilization of its existing Indigo through the careful development of more complex variable data applications, as well as continue educating the marketplace about digital print and its advantages for small and customized jobs. "We believe that if we need more equipment in the future, HP Indigo will be our first choice," says Mr. Bo.

Continued investment in digital printing will drive growth and the development of new applications at QL, setting the firm apart from China's other print service providers.

India

Thomson Press

Locations: New York; London; Mumbai; Kolkata; Delhi; Bangalore; Chennai, India; Noida, India

Employees: Over 1,000

Highlights

- South Asia's largest commercial printer
- Revenues over \$200 million (U.S.) annually
- Focus in very high quality and customer satisfaction
- Digital print is an early-stage business representing 2% to 4% of total revenue
- Indigo enables short-run print jobs, but variable data is a future growth area

Figure 4: Thomson Press



Thomson Press is an Indian powerhouse, competing globally for book publishing with such well-regarded names as RR Donnelley and Quebecor. Focused on the production of books and other high quality documents, the firm has gained a reputation as a high-quality and cost-competitive producer, with a production infrastructure capable of printing up to 1.1 million impressions per day – translating into up to 565,000 books of various sorts per day.

When the company began to explore digital print technologies, it took its time and chose carefully. The firm was aware of digital production printing since 2000, and experimented with machines from numerous manufacturers – when it made the decision to invest, it chose HP Indigo due to the quality of the output (especially with regard to the color quality, which the company describes as “exceptional.”)

When examining its press options, Thomson pursued a vigorous testing process based on sheet-fed printing that mirrored its offset operation. While the top goal for the organization was quality, reliability was also an important consideration. Indigo impressed the company during the quality tests.

In everyday operations, Thomson appreciates the flexibility of its Indigo infrastructure, especially the ability to print spot color or full color jobs quickly, with minimal turnaround and prep time. This flexibility theme continues with flexibility in the device's ability to print on multiple substrates without significant issues, as well as the ability to print color and black & white output on the same device. These capabilities are important to the pursuit of hybrid output – jobs that are produced on a combination of offset and Indigo equipment.

The company also cites its satisfaction with HP as a business development partner – the firm has gained business as a result of HP's business development efforts and has also established its own digital-centric business development program in-house.

While the Indigo infrastructure primarily prints “shorter run” jobs today, Thomson plans to significantly grow its digital business by embracing variable data and customized output. Central to this strategy are plans to roll out personalized calendars and diary books, as well as develop a sophisticated photo book line of business.

As an early adopter in South Asia, Thomson has the business development resources and the technical resources to take digital print to the next level. HP Indigo has passed the company's initial tests with flying colors and has become an integral part of its short-run and hybrid infrastructure. The next step will be developing “digital-only” businesses that will continue to fuel Thomson's growth over the next several years.

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Japan

Shiryo-Micro

Locations: Mitaka, Japan; Chuo, Japan (digital production center); Hachioji, Japan; Omiya, Japan; Kofu, Japan

Employees: 110

Highlights

- 30% to 40% of digital production volume is from advertising agencies and other print service providers
- Business cards represent the most important print product for the company today
- The company specializes in highly customized one-off and short-run jobs in digital color
- Since April of 2006, digital print demand has increased by between 300% and 400%

Shiryo-Micro is a specialized print services company located in Japan, with offset and digital production capabilities. The company specializes in documents requiring the highest quality output, including business cards and jobs printed “to specification” for highly demanding clients such as advertising agencies and marketing departments.

Mr. Sannomiya of Shiryo-Micro underscores the highly competitive nature of the printing business in Japan when he notes that he cannot disclose how many customers the company presently has. “I can tell you that between 30% and 40% of our customers are advertising agencies and other printers,” he notes.

*“We have to be very careful to propose plans that make the merits clear to our clients – in this, we see ‘people’ as having the key role, rather than printing quality or devices.”
– Mr. Sannomiya, Senior Director*

An HP Indigo client since e-Print days, the company selected HP Indigo due primarily to Indigo’s extremely high print quality. “Speed is less important for us than having the best quality,” says Mr. Sannomiya. “With the quality of today’s Indigo, we are able to accept orders that would once go to offset, such as catalogues and company brochures.”

Shiryo-Micro has a relentless focus on streamlining its business card operation, which represents its most important single document line of business, to reduce production costs while maintaining the high quality that its customers have come to expect. As a result, it’s planning to invest in a Web-to-print solution specialized for business cards, so that it can reallocate its professionals to focus on the most demanding customized jobs that consumers demand.

One example of such a job is a customized map for a major electric company. In the past, the company had been printing the customized A3-sized maps on offset presses using spot color. It switched to digital to give it greater versatility over the production costs and meet demand for the exact quantity desired in batches of five to ten maps per batch. The firm ended up producing tens of thousands of maps by the end of the job.

Moving forward, the company plans to invest carefully in variable data print with a focus on direct mail applications, but doesn't want to enter the market blindly. "We have to be very careful to propose plans that make the merits clear to our clients," notes Mr. Sannomiya. "In this, we see 'people' as having the key role, rather than printing quality or devices."

Figure 5: Shiryo-Micro



However, the company is not short of work today – Mr. Sannomiya notes that the firm has had a three to four fold increase in digital production print volume since April of 2006 as a result of its strategy. A great deal of this is due to how quickly the Indigo has taken the center stage as the primary print platform of the organization. "Now," he says, "we use the offset print machines when the digital printer is busy and we have enough delivery time."

With awareness of digital printing increasing dramatically amongst its client base, the company has seen its role shift from digital print evangelist to delivery of digital print by customer demand. Thus, its sales promotions have shifted from evangelizing the technology to communicating its capabilities to clients (primarily through direct mail). With the reliability of the Indigo (particularly the 5000) resulting in continuous operation, coupled with continued client demand, Shiryo-Micro expects continued strong growth for digital print over the next several years.

***"We use the offset print machines when the digital printer is busy and we have enough delivery time."
– Mr. Sannomiya,
Senior Director***

South Korea

Heung Ji Won, Ltd.

Locations: Seoul, South Korea; Kyongi Province, South Korea

Employees: 45

Highlights

- Major label printer for major Korean enterprises including Korean Air and Asiana Airlines
- One Indigo roll-fed device installed in January 2008
- Plans to leverage Indigo to produce high-quality labels with extremely rapid turnaround at premium price
- Highly customized labels with variable data elements produced at a higher quality than thought possible

“In the past, our strategy has been focused on converting – value-add to paper products – rather than high quality print materials. We’re more focused on die-cut, cutting, laminating, and other value-added services, but if we can get quality that certainly helps,” notes company president. “HP Indigo delivers on that quality.”

On average, the company produces about 200,000 square meters of stick-labels on a monthly basis for a host of applications – most notably the baggage tags for Korean Air and Asiana Airlines. Chances are fairly good that if you get a bag tagged at Seoul Incheon Airport’s two major carriers, it was printed by Heung Ju Won.

The company invested primarily in offset press technology up to this point, but decided to acquire digital production capabilities after studying the market for a number of years. It initially considered HP Indigo and Xeikon, studied the digital print opportunity for 12 years, and decided to go with Indigo due to HP’s significant investment in the technology and business development.

The need for digital print was driven by customer demand – the firm needed to be able to produce variable data, particularly 2D bar-codes and label-specific serial numbers. The company hopes that its Indigo digital press will produce 750,000 stick-on labels a year, averaging 100,000 labels produced in a peak month.

“We’re not large, so we don’t focus on mass production of very-high-quality or ‘prime’ labels,” he notes. “Instead, we’re focused on short-run, on-demand, rapid-turnaround, personalized labels. So far, Indigo has proven to be good at allowing us to deliver this capability. I no longer need to compromise on quality to get good results, fast, with the HP Indigo.”

Figure 6: Heung Ji Won

The company recently won a major order for 20 million custom labels from a major enterprise that was seeking highly personalized labels. Ordinarily, such a high-volume job would be produced on offset equipment, but the company has opted to produce it on the Indigo instead due to the requirement for customized serial numbers. The firm views this as a new chapter not only for its traditional business, but also for the HP Indigo in Korea.

While Heung Ji Won is still in the very earliest stages of operation of its Indigo, its initial impressions of the solution are positive, and it expects that the variable data capabilities the device offers will be crucial to growing its business and capturing more of the customized label opportunity in Korea.

KSI Co., Ltd.

Locations: Paju Bookcity, South Korea; Seoul, South Korea; China

Employees: 130 (South Korea), 220 (China)

Highlights

- Five Indigo digital production printers installed on-site since 1997
- Developed Korea's POD academic book market from scratch
- One of Korea's first all-digital print service providers
- Advanced workflow allows remote operation of some devices from China
- Indigo quality a major differentiator
- 100% utilization of all Indigos – 24/7 operation during peak times
- Future expansion plans call for development of photo finishing business

As one of South Korea's first digital print service providers, and claiming to hold 8% of the South Korean digital print market, KSI is a unique organization.

The company started out life as a digital archives company that produced and maintained an electronic database of most of the academic texts created by South Korea's educational institutions, which could be produced on demand. After creating this market niche, which it came to dominate, the company turned its attention to the other half of the equation – the production of academic textbooks on demand.

In 2007, the company added HP Indigo production printers to its existing inventory of black & white digital printers from Xerox and Océ, and reported a sharp increase in demand due to the quality of output.

“Traditionally, the Korean market has always demanded color,” explains Chae Jong Jun, founder and CEO. “Color levels that are acceptable in Europe or the United States aren't always acceptable in this market. Best-in-class color is critical – you can see how demanding the needs and requirements for color are in the traditional costumes of the Korean people. We believe that the level of color printing quality should be similar.”

“The things that really stand out about Indigo are print quality and reliability,” says Mr. Chae. “For all print jobs that require high-quality output, we always use the Indigo. The color quality is excellent, but the black & white quality is also superior to the 1200 dpi solutions from Xerox and Océ.”

As a result of its diverse print investment, KSI now has the unique ability to develop and print sophisticated color books, with cloth covers, on demand. Indigo digital production presses are crucial to the production of the internal pages, in color and black & white, and can deliver books and other printed materials on-demand within days (versus weeks or months for KSI's offset print competition).

“Overall, Indigo will serve as the foundation of KSI's future and the new business model.” – Chae Jong Jun, CEO

“One of our core goals was to create a digital print market in Korea, and we've succeeded,” Mr. Chae contends. “HP worked closely with KSI to help us develop our book-on-demand business for universities.

Most universities, as a result, are now printing most of their on-demand materials through KSI. After getting a sample of the quality, they're starting to demand Indigo print quality even in black & white!"

Demand has been a significant issue as a result. The company has been running its Indigo presses on a near-24/7 basis ever since they went live in the peak season just to meet the demand for black & white print jobs. With such high demand, KSI has been forced to turn down occasional one-off orders from its less-specialized print-on-demand business unit (such as photo albums). "There's so much business these days that estimating total impressions is difficult," says Mr. Chae.

Figure 7: KSI



"Overall, Indigo will serve as the foundation of KSI's future and the new business model," he says.

He notes that "what differentiates KSI from other print service providers is that we have our own digital print shop – we developed our own infrastructure and so we can control the entire operation and process from start to finish. It's a good model because even if we don't get print jobs from our non-academic lines of business, we can survive, since we have our own publishing demand coming from the academic target market."

Mr. Chae notes that "Indigo is not only a strong solution to replace offset, now it can replace the traditional photo finishing book as well," and the company has been producing a large number of these in its stand-alone print-on-demand business. While the standalone business is presently a smaller fraction of its revenue than the academic business, KSI has been working hard to develop business in this area leveraging the high quality of Indigo digital production print to areas that are tangential to its existing academic business.

In short, says Mr. Chae, "KSI is on the frontier of digital printing in Korea. We've become a showroom for all kinds of digital printing in Korea, so whenever I have a chance, I introduce what machines we have and their advantages."

The company employs a digital print business development team that develops new ideas, business models, concepts and applications for the business to drive growth (and support the potential addition of more digital print infrastructure – including Indigo – over the next several years).

Conclusion

If there was any doubt in the market as to the relevance of digital printing in the booming Asian economy, it should be put to rest with the universal success across diverse market niches that we found in our tour of Asian print service providers. Digital print – and digital color print in particular – has transformed western markets over the last several years, leading to print service providers that specialize in communications services rather than mere “ink on paper.” Now, the same revolution is sweeping Asian markets and being adopted to solve the unique challenges of Asian markets, showcasing the flexibility and adaptability of digital production workflows.

For HP, these successes are a validation of its Indigo strategy – in terms of the overall infrastructure that the company has developed around the devices, as well as the devices themselves. The robustness of the overall solution is cited by print service providers across a wide range of applications.

For HP competitors, the success of Indigo represents a threat as well as an opportunity. For those who choose to invest in the region, they underscore the success that comes from local market presence – but also indicate a strong and rapidly-growing competitor who is successfully building new market opportunities throughout the region.

For print service providers in Asia-Pacific, the success of these sites represents a call to action. Digital production print workflows are consuming an increasing amount of the document spending of Asian enterprises across the private and public sectors. To successfully grow in the future, Asian print service providers will need to begin focusing on delivering unique and highly differentiated services supported by digital production infrastructure. The business practices of the past will have to give way to a new mode of thinking seeking to pioneer and commercialize new applications enabled by digital production workflows.

For print service providers outside of Asia-Pacific, particularly in western markets, the growth and success of the digital print value proposition should underscore the validity of the digital model at home – and possibly serve as inspiration for new business models and applications to deliver revenue. The level of sophistication of the solutions being delivered by Asian print service providers – often with only a few years’ knowledge of digital print infrastructure at most – underscores the power of the digital print concept and the threat it represents to “business as usual.” At this point, skepticism is no longer warranted – if digital print can succeed in the often-chaotic business market in Asia, it will continue to grow as a mainstay in the markets of North America and Europe. Print service providers who are hesitating to invest should consider that fact as they make their forward-looking investment decisions.

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