Going Wide
Understanding the Opportunities
in Wide-Format Printing

A White Paper
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Abstract

Over the past 15 years, the commercial printing industry has been adversely affected by decreases in the overall demand for print. One bright spot, however, where demand for print is *increasing*, is wide-format graphics. As a result, commercial printers have been looking to wide-format as a potential new business opportunity. But wide-format is not like traditional small-format offset or even digital printing, and size is only a small part of the difference (as it were). Producing, pricing, selling, and marketing wide-format graphics all present unique challenges—and often significant barriers to entry.

In this white paper, we will look at the overall market for wide-format printing, and in the context of the overall commercial printing macroeconomic climate. We will also provide a technology overview or primer, as well as some tips and advice for pricing, selling, and marketing wide-format printing.

Introduction to Wide-Format

Wide-format printing as we know it today has its technological origins in the 1980s. By the early 1990s, electrostatic (and a few inkjet) plotters had grown to 36 inches wide and larger and were predominantly used for architectural and engineering drawings and schematics, courtroom exhibits, and other such applications. By mid-1992, wide-format color printing began to take off, but still remained largely the purview of service bureaus, sign shops, and other specialty graphics providers.

In the late 1990s and throughout the 2000s, market research conducted by now-defunct TrendWatch Graphic Arts[1] (among others) found that general commercial printers had been investing in wide-format printing equipment, but used it for little more than proofing, as few printers sought to commercialize on more applications utilizing this equipment.

Ask anyone in the wide-format printing market, and they'll tell you that learning the technology is actually pretty easy. What they find to be the significant challenges are:

- selling wide-format output
- marketing wide-format output services
- pricing wide-format output

In this white paper, we'll address these three concerns.

Some Housekeeping Items

In the industry literature, the terms "wide-format" and "large-format" are often used interchangeably. For the sake of consistency, WhatTheyThink has standardized "wide-format," which is the term we will use throughout this white paper.

A related question is what exactly constitutes "wide," and there is no standard definition of what minimum width constitutes "wide-format." In the early days, "wide-format" referred to any output that was larger than tabloid size (11x17 inches), which meant that wide format started at 13x19 inches. Today, the minimum size of what are considered "wide-format" printers is generally 24 inches wide. Still, this is just a rule of thumb—and some people have bigger thumbs than others. Roland's wide-format equipment, for example, starts at 30 inches wide, and progresses up to 54, and 64 inches wide.[2]

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[1] I was an analyst for TrendWatch Graphic Arts from 2000–2008 and wrote many of these reports and studies.
[2] Roland also has a 20-inch printer, but would not be considered "wide" by the standard definition of "wide-format."

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Output larger than 72 inches (6 feet) wide is often called "superwide" or "grand" (sometimes "grande") format.

The Macroeconomic Background—Or, "Why Wide-Format?"

Before we get into the specifics and mechanics of wide-format printing, we should step back a bit and look at the macroeconomic climate. It should be no secret to anyone involved in the commercial printing industry that business has been getting harder. Traditional commercial printing has been beset by many factors, not the least of which has been the emergence of the Internet and other electronic media in the 1990s. In 1998, printing industry was a $130 billion industry. By 2009, it has dropped to $87 billion.[3] That's a loss of $43 billion in 11 years. And while the contraction has slowed down, it has by no means stopped, as the most recent data show:
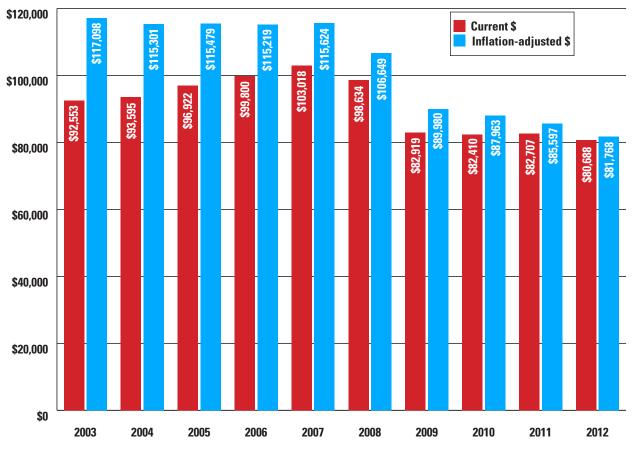
Figure 1: Value of U.S. Commercial Printing & Print Services Shipments, 2003 to 2012 ($ billion)

Year	Current $	Inflation-adjusted $
2003	$92,553	$117,098
2004	$93,595	$115,301
2005	$96,922	$115,479
2006	$99,800	$115,219
2007	$103,018	$115,624
2008	$98,634	$106,649
2009	$82,919	$89,980
2010	$82,410	$87,963
2011	$82,707	$85,597
2012	$80,688	$81,768

Source: Strategies for Management analysis of U.S. Bureau of the Census data

Strategies for Management's five-year forecasts for general commercial printing are not especially rosy, and foretell continued contraction and consolidation.[4]

The contraction of the printing industry can be thought of as, essentially, a quantification of the demand for printed materials. Mobile devices and the ability to access content on them has continued to erode demand for printed materials. This could be an entire white paper[5] itself, but suffice to say we have

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[3] Joseph Webb., Ph.D., and Richard Romano, *Disrupting the Future: Uncommon Wisdom for Navigating Print's Challenging Marketplace*, Strategies for Management, 2010, http://www.marcomuniversity.com/bookstore/storefrontredux/product.asp?id=5323&.
[4] The impact of the 2008 Great Recession (and even of the 2001 "mini-recession-ette") cannot be ignored, of course, but the downturn for the printing industry began well before these macroeconomic disasters.
[5] As an example, consider that this document, which we consider a "white paper," will in all likelihood never actually be printed on paper and is, in fact, being disseminated electronically.

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reached the point where generational shifts in the way people access content—which many of us predicted circa 1999/2000—have come to pass, with the so-called "millennial" generation now of content-consuming age and are decidedly electronic.

I and my colleagues at WhatTheyThink have written many stories about, and had many conversations with, commercial printers, analysts, manufacturers, and many others, and there have been a few primary strategies that shops have pursued to help combat this prevailing trend of a shrinking industry and contracting market for print:

- go out of business/retire

- acquire another printing company or be acquired

- maximize efficiencies and become a commodity printer

- expand into general "marketing services" that include things other than print

- expand into wide-format or other type of specialty printing

Not all of these are mutually exclusive (except perhaps the first one), but it is the last item that we will consider in this white paper.

Re-Enter Wide-Format

General commercial printers are no strangers to wide-format equipment, having come to it via proofing. In the past several years, commercial printers[6] have been looking at wide-format with new eyes, and seeking to more directly capitalize on the versatility offered by the equipment. Researchers across the board have been tracking wide-format graphics as an expanding market—a rarity in printing today—but this reflects the fact that many wide-format applications either cannot or will not readily be replaced by electronic or digital alternatives.[7] In fact, the capabilities of new wide-format printing technologies are actually disrupting other forms of specialty graphics, such as electric signs. Following the International Sign Association's (ISA's)[8] expo last February, the ISA's executive vice president remarked to me that he had been surprised to see so many printing equipment manufacturers on the show floor, and that many print applications were stealing the thunder from "traditional" electric sign applications. It's pretty exciting to be the disruptive force for a change!

The Specialty Graphics Imaging Association (SGIA) is preparing its annual report on the status of the sign and display market[9] and survey respondents were bullish about the immediate future:

> Sales growth in the graphics and sign segment continues to be strong. For calendar year 2012, companies in this segment reported a median sales growth of 16 percent, stronger than their expected 11.2 percent rate reported at the same time last year. For 2013, companies expect a growth rate of 19.2 percent. More than two-thirds of companies (67.5 percent) expect 2014 to be more profitable than 2013, while no companies think it will be less so.

Everyone it seems sees wide-format applications as a growth area.

Barriers to Entry/Growth

Expanding into wide-format—like expanding into any new product or service area—is not without its challenges. The SGIA's survey tracked the top challenges for sign and graphics producers:

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[6] By commercial printers, we typically mean offset shops, some of which have also added or transitioned to small-format digital. Also, screen printers represent another class of commercial shops moving into the digital wide-format space.
[7] It is worth noting that at last February's International Sign Association Sign Expo, the "dynamic digital signage" pavilion was a hot show floor area, and it's also worth noting that Roland announced a digital signage solution.
[8] Visit them at http://www.signs.org/default.aspx.
[9] As of this writing, the report was still in the draft stage, with official publication forthcoming. Visit sgia.org for more information and their many resources for print providers.

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Table 1: Barriers to Growth

Downward pressure on prices	59.3%
Finding new customers	45.7%
Rising costs	44.4%
Recruiting sales personnel	35.8%
Recruiting production personnel	23.5%
Cost of new technology	17.3%
Obtaining financing for investment	12.3%
Training employees	12.3%
Recruiting management personnel	7.4%
Understanding new technology	7.4%
Ability to secure credit/lines of credit	6.2%
Other	4.9%
Globalization (off-shoring, outsourcing)	1.2%
Environmental issues/regulations	1.2%

Source: SGIA Industry Analysis, 2013 Equipment & Financial Outlook Benchmarking Report, Graphics & Sign Community

Note that the technology itself is actually the *least* of shops' worries. The top challenge, "downward pressure on prices," reflects the fact that wide-format has become a highly competitive market, as the dropping cost of the equipment, along with the attendant interest in wide-format, has increased the number of players. (One major barrier to entry has been questions over how to price wide-format output. We will look at this later in this white paper.) In many ways, wide-format printing has become commoditized. However, as we saw earlier, the change in the number of establishments in any given market is reflective of the demand for what those establishments produce. For general commercial printing, the demand has been contracting, leading to a reduction in total commercial printing establishments. However, for wide-format graphics, demand has been *increasing*—leading to an increase in the number of establishments offering wide-format printing services.[10]

For the uninitiated, let's take an overview of the current wide-format landscape.

Wide-Format Overview

Wide-format is not a million miles removed from offset printing. Traditionally in the industry, the type of equipment you bought determined what you printed—and vice versa. So if you were a magazine or catalog printer, you owned a heatset web press, and that was your market niche. If you did high-quality brochures and other marketing collateral materials, you had a sheetfed press. And so on.

In wide-format printing, the same basic rules apply. The type of equipment you have will in large part determine what it is you print, or what applications you specialize in. We'll see what those are a bit later.

Wide-Format Printing Technologies

The earliest wide-format devices were electrostatic printers, using the same basic process that a laser printer or copier uses. By the end of the 1990s, electrostatic plotters had become obsolete—as had

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[10] Demographically speaking, it has traditionally been very difficult to ferret out accurate counts of wide-format establishments. Unlike general commercial printing, which has generally been lodged in a single NAICS (the North American Industrial Classification System used by the Bureau of the Census to track economic activity), "wide-format" has been strewn in a wide variety of manufacturing and service sectors ranging from sign shops, to retailers, to garment producers, to ad agencies, to...well even to general commercial printers. As a result it has often been difficult to get an accurate accounting of them all.

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the term "plotter"—and the vast majority of the wide-format devices on the market today are inkjet devices.[11]

Inkjet comes in various flavors—thermal, piezo, continuous—but for our purposes here, the distinctions are bit beside the point. Rather, it's more useful to look at wide-format equipment in two basic ways:

- rollfed vs. flatbed, and
- ink technology

As wide-format printers began to proliferate in the 1990s, the dominant configuration was rollfed: a roll of paper or other substrate is loaded into the machine, and you can thus print whatever length you want. This also means that the substrate has to be flexible enough to be rolled and fed into the machine. It's easy to see what the limitation of this is: if the client wants a wide-format print on foamcore or some other rigid material, roll-fed material needs to be needs to be mounted after printing. This is not an insurmountable problem (so to speak), but adds an extra step in the production process, extra labor expense and time, extra materials to the process, and longer delivery time to clients.

Enter flatbed printers.

Flatbed printers—which print on single sheets or "boards"—have been around for more than a decade but, as with many technologies, were bogged down in cost and speed problems, but improvements were swift. The improvements to flatbed printers were largely a combination of printhead design and development and the evolution of ink technology, as well as effective ways of moving the substrate past the printheads—or, conversely, moving the printheads over the stationary substrate. Other challenges have involved the physical size of the printers; these printers can be huge and require a substantial footprint in a print facility.

The killer app for flatbeds is that they can print on a wide variety of rigid materials. And with new ink and curing technologies, you'd be hard pressed to find any object these printers *can't* print on. They have opened up an immense, seemingly limitless variety of specialty printing applications.

Here are just some of the things I have seen:

- wall coverings and décor, including digitally printed wallpaper, drapes, and flooring that can simulate anything from tile to wood;

   printed furniture, especially tabletops, bars, and even chairs;

- "found" objects, such as surfboards, guitars, hockey pucks, and laptop computers;
- even coffins[12].

Think Ink

The other important part of the equation is ink, and this is where the fundamental distinction among the various classes of equipment lies. Let's have a look at the primary categories of wide-format inks.

Solvent inks comprise a type of chemical called volatile organic compounds (VOCs) which evaporate readily, which means that the ink dries fairly quickly. Solvent inks are pigment- rather than dye-based, which makes them long-lasting and fade-resistant, are inexpensive, and are waterproof and UV-resistant. However, solvent ink vapors can be toxic, making them a workplace hazard requiring special ventilation systems. Discarding the used solvent becomes an environmental issue.

As a result, *eco-solvent inks* were developed, which comprise a "milder" type of solvent that take longer to evaporate, and often require heat, but are less hazardous. The term "eco" is a *bit* of a misnomer, as they

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[11] Some manufacturers have specialized in photoprinting, a continuous-tone laser imaging process. Others, particularly those who specialize in textile printing, use dye-sublimation.
[12] I kid you not: http://www.lifeart.com.au/.

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are not 100% environmentally friendly and still possess some of the hazards of more aggressive solvents, although they do require less ventilation; "mild solvent inks" is perhaps a better term. Still, eco-solvent inks have become a popular option as the color quality, durability, performance, and cost have all improved.

Unless you're the Wicked Witch of the West, water is a pretty non-hazardous solvent, so water-based *aqueous inks* have emerged as an even safer alternative to solvent inks. Aqueous inks can be either dye- or pigment-based, and often include other liquids than pure water, such as glycol, to help improve performance and volatility. As it is, aqueous inks often require special coated substrates to adhere properly, and are not always well-suited to non-paper substrates such as plastics or vinyls, although some newer formulations are conquering these limitations.

Ultraviolet-curing, or *UV inks,* have started to penetrate (as it were) into conventional offset printing, but have also become very popular in wide-format printing. UV inks comprise chemicals that, when exposed to ultraviolet light, dry more or less instantly. UV inks dry fast, but can also produce more vibrant colors, can be used on a greater variety of substrates (such as plastics, vinyl, foil, paperboard, and other specialty substrates), and offer increased health and safety for press operators and the environment. Some of the drawbacks of UV inks include heat and energy use to power the UV lamps, as well as the fact that ultraviolet light can be hazardous without adequate precautions and protection. Today, new printers that use much cooler and faster LED lamps for drying are appearing on the market, and while many systems that use them are rather costly right now, it's safe to say they represent the future of UV print technology.[13]

Meanwhile, *latex inks* have also appeared on the market. "Latex" is a generic chemical term that refers to a "stable dispersion (emulsion) of polymer microparticles in an aqueous medium,"[14] and is not related to the natural latex exuded by plants or the synthetic latex used to make gloves or other *faux* rubber items. This means that anyone with latex allergies can safely work with latex inks. Latex inks are water-based, which makes them a bit more environmentally friendly than solvent inks. What has driven the market for latex inks and their corresponding devices has been their ability to print on a wide variety of coated and uncoated substrates for both indoor and outdoor use on the same machine. They also dry quickly, which speeds the workflow as finishing operations can be applied immediately after printing.

The type of ink and this the type of printer you buy will largely be driven by what it is you want to print on. Which brings us to…

Substrates

We saw a moment ago that wide-format substrates can be either rollfed or sheetfed (aka rigid). Rollfed substrates comprise:

- paper, in all its myriad varieties
- flexible plastics
- vinyls
- canvas
- textiles
- rigid substrates can include, but are no means limited to:
- thick plastic
- board
- glass
- wood

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[13] Roland's VersaUV portfolio are some of the lowest-cost UV printers on the market and they are all LED-curing.
[14] http://en.wikipedia.org/wiki/Latex.

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- metal
- three-dimensional surfaces like balls, laptop computers, doors, and other types of "found objects"

The ability for flatbed printers—and especially UV flatbed printers—to print on almost any surface has opened up a seemingly infinite variety of specialty printed applications.

There are some other unique substrates that can offer the wide-format print provider some opportunities to carve out their own product specialties, such as:

- Aluminum and aluminum composites
- Imitation metallics
- Foam-centered materials like foamcore (a polystyrene board with clay-coated liners) and biodegradable foamboards such as Duraplast or Insite
- Magnetic materials
- Renewable material-based substrates
- One interesting substrate, TerraSkin, is as the company says, "paper made from stone," or "a combination of mineral powder (>75%) and a small quantity (<25%) of non-toxic resin combined to create an environmentally friendly paper"[15]

Finishing

In wide-format printing, the *real* value is often in the finishing. Here is a quick rundown on today's most popular options for finishing, some of which also fall under the category of "converting" (à la packaging), as wide-format graphics are often "converted" into something else.

- Laminating/coating
- Mounting
- Hot stamping
- Grommeting (punching and reinforcing, often with metal or plastic rings, holes or "eyelets" in a print)
- Cutting (die-cutting uses a shaped steel "die" that cuts the print into a shape, while laser cutting can create more elaborate and complex shapes or effects)
- Routing (a procedure that cuts elaborate patterns, grooves, and shapes in a substrate, often used to create the individual parts that will be assembled into a larger graphic or installation)
- Doming (a technique that applies a thick polyurethane resin on top of a printed area that will harden and thus add an extra dimension—a plastic "dome," essentially—to decals, labels, or other specialty items)
- Vacuum forming/thermoforming (heating a printed, thermoplastic material and then stretching it over a mold, and/or using a vacuum to force the substrate to conform to the shape of the mold)
- Tiling (dividing an unprintably large image into smaller pieces, or tiles which are assembled like a giant jigsaw puzzle)

In many cases, signage and other varied printed components are then "installed" into a location. The installation can be done by the printing company, or contracted out to a professional installer for a given type of graphics.

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[15] I would argue that paper itself is environmentally friendly *per se*, but a discussion of this topic is beyond the scope of this white paper.

Software

Most print providers today are familiar with the RIP—the *raster image processor*. As a result, everyone generally knows what purpose RIPs serve in the production workflow: they take a file prepared for print (PDF, InDesign, Quark, PostScript, etc.) and convert all the text and graphics into the dots that will then be generated by the actual printing device.

There are a wide variety of RIP makers whose wares offer various degrees of features and functionality, and typically a wide-format manufacturer bundles or recommends compatible RIP hardware and/ or software. (RIPs today are usually software RIPs that run on a Windows, Mac, Linux, or even Apple iOS devices like iPads.) More often than not, what they provide comprises little more than very basic functionality that will let you print, but not give you as many features or as much control over the output as you may require. There are exceptions, of course; [Roland's VersaWorks](#), for example, offers a comprehensive software RIP for the company's wide-format printers and cutters.

Some features and issues vis-à-vis RIPs to pay special attention to:

- Color management
- Waste reduction
- Cost estimation and tracking
- Maximizing processing speed
- Multiple device management
- Scalability
- Preflighting and correction
- Support for new features
- Support for new print products
- Cross-application development
- Ease of training and support

Wide-Format Applications

With today's equipment, the applications for wide-format printing are ever-expanding. As a result, this white paper could only scratch the surface. Here are some of the most popular applications:

- Signs, posters, banners
- POP/POS
- Backlit films
- Window displays
- Décor (wallcoverings, floors, custom-printed draperies, etc.)
- Vehicle wraps
- Textiles/clothing

SGIA has tracked what are currently the top print applications for wide-format graphics producers:

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Table 2: Top Wide-Format Print Applications

Product Area	% of Companies Producing
Banners	91.7%
Window Displays	82.6%
Indoor Wall Graphics	81.8%
Point of Sale/POP	77.3%
Trade Show Displays	74.2%
Presentation Graphics	73.5%
Floor Graphics	69.7%
Vehicle Graphics	64.4%
Backlit Signage	63.6%

Source: SGIA Financial Outlook & Business Growth Plans Survey and its Market Trends & Product Specialties Survey, 2013

The Economics of Wide-Format

It is easy to see why wide-format was not traditionally thought of as a profit center by commercial printers: run lengths were very short (especially compared to offset), consumables costs were very high, equipment could be slow and not especially productive, and maintaining a full range of substrates and finishing options to glean as much business as possible was not feasible.

But, as they say, that was then and this is now.

Profit Analysis

One way of looking at the economics of wide-format printing is by doing a profit analysis that factors in cost of the equipment, the supplies, consumables, labor, and other factors. This is often a feature of RIP or MIS (management information systems) software, but is a useful tool to use while shopping for equipment and doing your due diligence.

Here is what a profit analysis calculator looks like:

Table 3: Blank Profit Analysis Calculator

Equipment price ($)
Ink cartridge price ($)
Ink cartridge size (mL)
Typical production speed (ft^2/h)
Media roll price ($)
Media roll length (ft)
Media width (in.)
Media price per ft^2 ($)
Ink cost per ft^2 ($)
Total supplies cost per ft^2 ($)
Average price of sold graphics per ft^2 ($)
Average cost of labor per hour ($)
Average days of printing per week (#)
Average hours of printing per day (#)
Production cost (ink + media), incl. 10% scrap ($)
Labor cost ($)

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Monthly equipment payments (60 months)
Monthly cost ($/mo.)
Monthly sales ($/mo.)
Monthly profit ($/mo.)
Yearly profit ($/yr.)

What follows are two examples—representing a two different printer price points—of how this would be filled out. The first is an ROI scenario for a Roland VersaCAMM® VS-540 printing on Roland LBV3 Light-Weight Banner Material in "standard" mode on a four-hour-per-day schedule. (The most commonly produced materials on the VS-540 are signs, banners, and vehicle graphics.)

Table 4: Profit Analysis for Roland VersaCAMM® VS-540

Equipment price ($)	$19,995
Ink cartridge price ($)	$128.99
Ink cartridge size (mL)	440
Typical production speed (ft²/h)	130
Media roll price ($)	$215.95
Media roll length (ft)	120
Media width (in.)	54
Media price per ft² ($)	$0.40
Ink cost per ft² ($)*	$0.17
Total supplies cost per ft² ($)	$0.57
Average price of sold graphics per ft² ($)	$4.00
Average cost of labor per hour ($)	$15.00
Average days of printing per week (#)	5
Average hours of printing per day (#)	4
Production cost (ink + media), incl. 10% scrap ($)	$1,504.55
Labor cost ($)	$300.00
Monthly equipment payments (60 months)	$420.00
Monthly cost ($/mo.)	$420.00
Monthly sales ($/mo.)	$10,400.00
Monthly profit ($/mo.)	$8,175.45
Yearly profit ($/yr.)	$98,105.35

Media roll price is based on 54-inch Roland Light-Weight Banner Material.

Here's a second ROI scenario for a Roland SOLJET® Pro 4 XR-640 printing and cutting on Roland LBV3 Light-Weight Banner Material in "standard" mode on a six-hour-per-day schedule. (The most commonly produced materials on the XR-640 are banners, signs, and vehicle graphics.)

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Table 5: Profit Analysis for Roland SOLJET® Pro 4 XR-640

Equipment price ($)	$29,995
Ink cartridge price ($)	$128.99
Ink cartridge size (mL)	440
Typical production speed (ft²/h)	230
Media roll price ($)	$215.99
Media roll length (ft)	120
Media width (in.)	54
Media price per ft² ($)*	$0.40
Ink cost per ft² ($)	$0.13
Total supplies cost per ft² ($)	$0.53
Average price of sold graphics per ft² ($)	$4.00
Average cost of labor per hour ($)	$15.00
Average days of printing per week (#)	5
Average hours of printing per day (#)	4
Production cost (ink + media), incl. 10% scrap ($)	$2,457.60
Labor cost ($)	$300.00
Monthly equipment payments (60 months)	$630.00
Monthly cost ($/mo.)	$3,387.60
Monthly sales ($/mo.)	$18,400.00
Monthly profit ($/mo.)	$15,012.40
Yearly profit ($/yr.)	$180,148.78

* Media roll price is based on 54-inch Roland Light-Weight Banner Material.

RIP or MIS software can perform these calculations automatically.

Some of the variables can fluctuate wildly from system to system. Take, for example, the cost of ink. Ink consumption is often measured in "cost per square foot," but that will vary depending upon the type of ink and the type of image being printed. For example, a solvent ink contains a lot of liquid and most of it evaporates during drying, compared to, say, a UV ink, where very little of the total volume evaporates out. So if you buy a liter of UV ink for, say, $200 and try to compare it to a cartridge of solvent ink for, say, $70, it's not apples and apples, but a lovely fruit salad. Meanwhile, if you are printing a simple engineering drawing, you may use less than $1 worth of ink. But if you are doing a fine-art print, a photograph, or something with a lot of solids, you can use $40+ worth of ink on one print. So when estimating the cost of ink, anticipate the types of images you will be printing, and during the shopping process do some test prints of what you think will be representative images, and be sure to track the ink usage during the test printing stage.

Also note that the tables above do not include the cost of finishing equipment, finishing supplies (like mounting boards, etc.), or the time/labor required for finishing and installation.

So when you are shopping for equipment, know what the variables in those tables are. Note what printing mode the numbers correspond to, note the media type, and think about the type of images you will be printing.
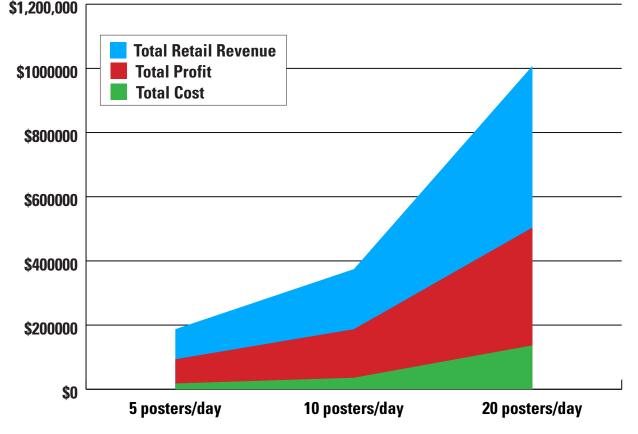
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Generally Speaking

Any profit analysis will vary by equipment, media, inks, the nature of the graphics, the finishing processes required, and even the extent of the design and installation processes. Is the shop doing the graphic design, or just accepting files from an agency or other content creator? What about installation, as the end result is often little more than a simple print? Is the print shop handling the installation, outsourcing it, or is the customer going to be responsible for that stage of the process?

My colleague Marco Boer, an analyst with I.T. Strategies, has done a general "back of the envelope" analysis of the potential profit associated with wide-format graphics.

- Average retail selling price per square foot (printing only): $6.00

- Average retail selling price per square foot (printing plus lamination and dry mounting): $13.00

- Cost per square foot to the commercial printer (assuming a $10,000–$20,000 printer): $1 (print), $1 (lamination), $0.50 (dry mounting)

In this scenario, each print generates a 5X gross profit (this excludes monthly equipment costs and labor). Mr. Boer concludes: "if one were to keep retail pricing and cost constant on a per square foot basis, printing anywhere from 5 to 20 six-square-foot posters per day (at 240 working days per year) results in between $75,000 and $360,000 in gross profit annually."

Figure 2: The Wide-Format Printing Opportunity

Source: I.T. Strategies

This is all not to say that wide-format printing is a "build it and they will come" proposition. There are a few challenges, and some of the biggest barriers to entry include pricing, marketing, and selling wide-format output.

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Selling Wide-Format

Back in the late 1990s and early 2000s, many commercial printers who were making the transition to digital printing found that selling digital required a very different strategy than traditional printing. It was a longer sales cycle (often twice that of offset), with shorter runs and thus smaller sales per job (and, also thus, smaller commissions for salespeople), and dealing with a whole different set of print "buyers" who were not really print buyers at all, but could range from C-level executives and business owners down to IT professionals.

Wide-format has some similar, and also some unique, challenges. One of the biggest is that despite the emphasis on the items that wide-format equipment produces, you are not really selling *products*. You are selling a *service*. Wide-format printing is all about variety, but it is first and foremost about helping the customer increase his or her own sales via compelling graphics. Your equipment should be thought of as a means toward achieving that end. As a result, you are less a manufacturer of printed products and more a strategic marketing partner for customers.

But even before we get to the marketing and selling, one big question often involves the actual pricing of wide-format output. This has been one of the big questions with digital printing in general, and wide-format printing in particular: "what the heck do I charge for this stuff?"

Pricing

How do you price wide-format output? Unfortunately, the answer to that is everyone's favorite answer to these types of questions: "it depends." It's not as simple as

$$\text{printing cost } x \text{ + plus mark-up } y = \text{cost of print } \$z/\text{ft}^2$$

As you can see from the profit analysis calculators presented earlier, there can be a great deal of variability in equipment, in consumables, and in other parts of the process. Even different leasing terms for equipment can affect what you need to charge for output.

In the most general terms, the selling price for wide-format output can range from around $0.40 up to $6.00 per square foot—and, as we saw earlier, more (up to $13 a square foot) if it is laminated and dry-mounted, even more if there is a more elaborate finishing process.

Using a profit analysis calculator is a good place to start to determine selling price. MIS or customized estimating software can crunch the numbers based on your inputs. The inputs to use are spelled out in the profit analysis calculators (i.e., equipment, ink media, labor, etc.) , but some others to consider would be:

- rent (or whatever you spend on your physical plant)
- utilities (electricity, etc.)
- prepress (typically a labor cost equivalent to about 15–20 minutes per file, although as we all know some files require more work than others)
- administrative overhead

Many wide-format output producers use all of these inputs to determine a "cost per hour" for a given piece of equipment, and then base the selling price on an estimate of how long a job will be on press. That is also a good starting point.

Like any printing job, there are adjustments that can be made to the selling price that depend on the relationship (actual or desired) with the customer. If they do a lot of printing—small- and wide-format— you may be more inclined to quote them a lower price on a wide-format project than you would a new customer just coming in off the street. Or, on the other hand, perhaps that new customer is someone whose long-term business you are trying to court. Also: extra charges for rush jobs, problematic files, shipping, etc. As always: it depends.

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Marketing and Selling

Okay, you are small-format commercial printer interested in pursuing wide-format printing. You've been to the SGIA and Print/Graph Expo shows, and you're excited by the technology, but overwhelmed by how to integrate it into your own business. How to gain a foothold in that space or—more importantly, how do you gain credibility?

There are a couple of strategies. The first could be to pick a niche or application type that you really are excited by, and then strive to become the best at producing that kind of application. For example, vehicle graphics. That's a hot application right now. So say you have decided to become the best darned vehicle graphics printer and installer in your area.[16] You do your due diligence, buy the right equipment, and immediately experiment on your own vehicles to demonstrate proficiency as well as start a portfolio. Then you market the heck out of it. That's one way to go.

A better, safer way to begin is to start with your commercial printing customers. Very often, printers have no idea what other marketing services/communication needs a client has beyond the few items they get printed by a given shop. Maybe a restaurant customer whose menus you print also needs new signage, interior or exterior, to announce new menu items or other specials/promotions. Perhaps they are in the midst of a rebranding or redesign and need new exterior signage. Maybe a customer wants to pursue an outdoor advertising campaign. And so on. Gauging the wide-format needs of current customers can be a great way of determining what wide-format applications you can start offering that *already* have a built-in market among your customer base. And being able to offer wide-format as a part of package that also includes whatever small-format printing you do can make it more cost-effective for the client to have everything printed under one roof than to go through another third party.

Also remember that you can begin outsourcing certain wide-format elements as you ramp up internal production.

Going Wide

As we have seen, moving into wide-format printing has its challenges, none of which are insurmountable. But it also opens up exciting new possibilities—profitable ones—for commercial print providers who are forward-thinking, willing to break from the traditional ways of thinking about print, and willing to do their homework.

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This white paper was sponsored by Roland. For more information about Roland's wide-fornat product portfolio and solutions, please visit www.rolanddga.com.

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[16] Although like commercial printing, a lot of wide-format printing can be done on a Web-to-print basis with clients who are hundreds or even thousands of miles away, it's hard to do vehicle graphics that way, so that will generally remain a local print application.

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