A Newcomer's Guide to
Wide Format Markets

EXPERIENCE

END OF SEASON
SALE
FINAL CLEARANCE
HOT DISCOUNTS

by
John H. Switzer

EasyWider

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* If you have questions or comments at any time while you're reading this guide, please don't hesitate to contact me at EasyWider. Just send me comments via this page: http://easywider.com/newguide, or send me an email at john.switzer@easywider.com.

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Preface

This eBook is an introductory guide, and the purpose of the guide is to simply guide you. It's not meant to be an exhaustive treatment of wide format markets, equipment, or applications. It will, however, give you an idea of who uses wide format documents and how they use them. It's a good starting point for anyone entering the wide format market – either as users / operators or as one who sells or maintains wide format equipment.

Who is this guide for?

This guide will be useful to:

❖ Sales people: everyone in the sales process – representatives, managers, and analysts. Anyone selling wide format equipment or prints needs a solid understanding of their customer's business – what they do and their print needs. This includes both those "working the counter" at a print shop and sales people making calls on customers.

❖ Service and support personnel: those who maintain and repair wide format equipment so it produces the top-quality prints that customers need and expect.

Since service personnel visit customers at least as often as sales reps, extending their understanding of a customer's business, needs, and wants to help them get the most from their printing equipment greatly improves the overall customer experience and leads to future sales.

❖ Print operators: anyone involved in the production of graphic communications prints for commercial resale or for internal use by their own organization and anyone involved in the preparation and printing of technical documents.

❖ Graphic designers: who need to know a customer's business, needs, and applications in order to create effective and attractive designs.

❖ Everyone else: anyone involved in wide format in any way not already listed.

Introduction

If you're like most new arrivals in the world of Wide Format, you're a bit lost. You've got a notion of what wide format means, but you're a little unsure of where to go and what to expect beyond "bigger documents".

Print consumers – the people who need "big" prints – are the real customers here. They may want to buy wide format products like printers, scanners, and RIPs to produce their own prints in their own in-plant shop. Or they may buy wide format prints from commercial printers.

So, here's a guide to help you get started and find your way in the world of **"Wide Format"**.

What Do We Mean By Wide Format?

First, let's define "Wide Format".

Let's consider wide format as all documents larger than:

♦ 11" x 17" (ANSI B-size), or

♦ 297mm x 420mm (ISO A3-size).

Many narrow-format, cut-sheet printers can print up to these sizes. But anything larger than requires larger media and printers capable of handling them – and these often use roll-fed media.

That's where wide format shines – and yes, it includes "large format" and "grand format", in case you come across those terms.

Application Segments

The market for wide format documents takes in both *Graphic Arts* and *Technical Document* applications. Some customers use both types, some use just one of the two. So, to start, let's broadly define those two applications areas.

Graphic Arts

Graphic Arts applications include any document presenting information about events, sales, directions, and so on. They're usually mounted or hung and viewed at a distance, not held in the viewer's hands and read up close. Some may not even include any text at all – they're purely graphic in nature.

Sales poster

Transit map

Technical Documents
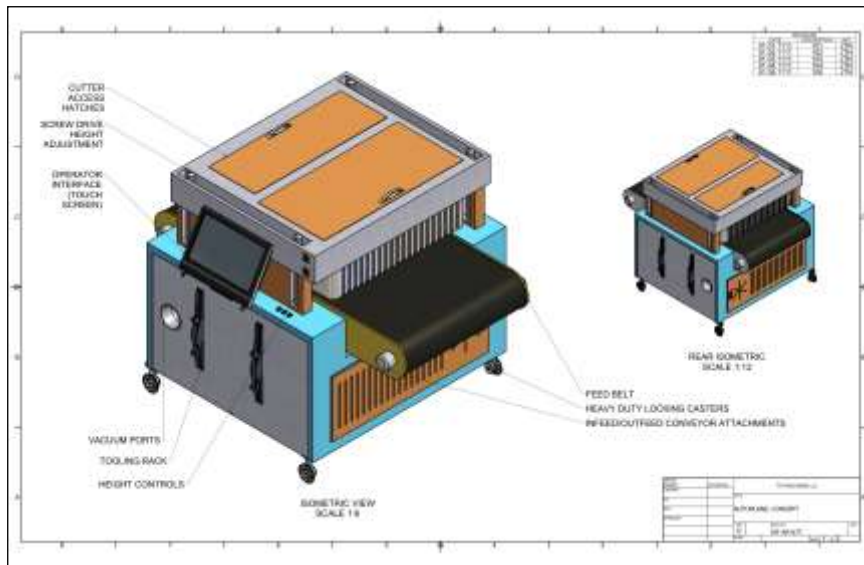
"Blueprints"

Technical Documents cover what you probably think of when you see engineering drawings or "blueprints". They contain pictorials and instructions for manufacturing operations or assemblies, and architectural and construction plans. They include details and data, so users view them up close.

We'll frequently mention "banners, posters, signage, billboards, murals, engineering drawings, maps", and so on – items that we can all easily identify. But full applications often require much more than the simple production of the prints themselves. For example, graphic arts

prints often need to be laminated, cut, and mounted. Technical documents may need folding before they get distributed.

Who Are The Customers?

Here's a list of chapters in our guide and the customers they cover.

Chapter	Market Segment
1	Retailing
2	Manufacturing
3	Trade Shows, Exhibits, Events
4	Government
5	Education and Institutions
6	Architects, Engineering, Construction (AEC)
7	Utilities and Telecommunications
8	Geographic Information Services (GIS)
9	Commercial Printing

Chapter 1 – Retailing

What's bigger than retail?

Worldwide, retailers generate almost $15 trillion in revenue – making it one of the largest markets for wide format products. Retail covers all the businesses that sell goods and services to consumers for personal, family, household, or even business use.

We all use retail outlets every day, including:

♦ Department stores

♦ Pharmacies

♦ Automotive stores and dealerships

♦ Convenience stores

♦ Wholesale clubs

♦ Supermarkets and grocery chains

♦ Discount stores, and

♦ Specialty shops selling appliances, electronics, clothing, and so on – you get the picture.

What Are Their Typical Applications?

Sales banners in a window

As you might expect, it's an extremely competitive market. Because it's so competitive, all retailers relentlessly promote their products to get you to buy. To do that they use advertising – of which we've all seen our share! And wide format printing figures heavily in their advertising strategies and budgets.

These are some of the most common applications you'll find in the retail market.
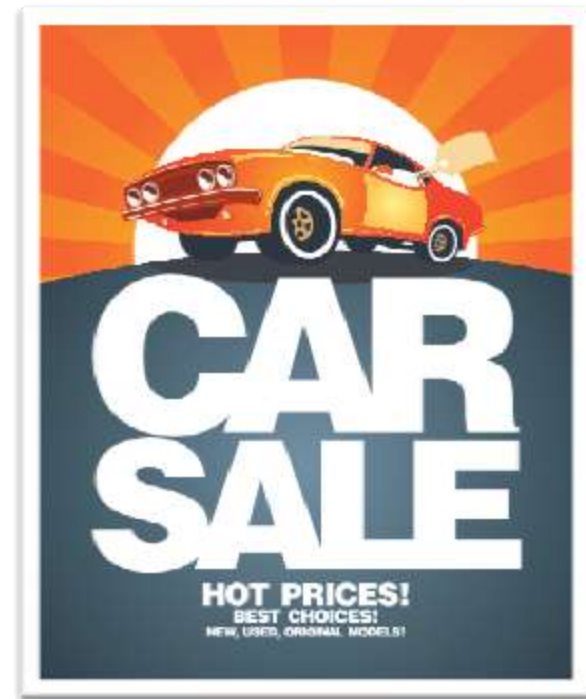
Poster

❖ Posters - display information for shorter distances than billboards. Commonly printed at about 24" wide x 36" tall (ISO A1 size), they may be used either indoors or outdoors. The mounting location dictates the media and finishing needed, but you'll often find them on paper, film, vinyl, and fabrics.

Textile Banner

❖ Banners – much larger than posters, they provide short messages for viewing at distances over about 10 feet (3 meters). You will find them mounted on walls and hanging from the ceilings in stores and malls. Common media choices include: vinyl, fabric, and canvas.

Point of sale signage

❖ Point-of-Purchase displays – get placed next to the merchandise they're promoting, often right at the cash register. They directly sway customers into making quick purchasing decisions. Unlaminated paper is the most common media used since they're used indoors and usually mounted for short-term use.

Window clings and decals

❖ Decals or "window clings" – advertising that gets mounted on store windows and are printed on clear vinyl or films. They may have a light adhesive coating on the mounting surface; some rely on static to hold them in place.

Floor graphics

❖ Floor Graphics – for "directing traffic" in store departments, etc., are common. They're actually decals, usually made from a vinyl with an adhesive backing, and include a protective over-coating or lamination to

increase durability. They require special installation skills, especially when you consider that they're mounted where people walk.

Portland Street Motel Signs by TEMFR, licensed under CC BY-SA 2.5

Backlit signs

❖ Backlit Displays – high quality graphics placed in a rear-illuminated fixture that gets mounted on a wall or other flat surfaces. They're usually printed on backlit films, but simple paper also works for short-term use.

Have you seen these types of applications before? Most likely you have but never thought about them being printed on wide format equipment. The next time you're out and about take time to look for them. Look at them closely and note the details – what kind of media do they use, how are they mounted, do they have any finishing beyond printing? You won't have a hard time finding them.

What Are Their Worries, Wants, And Needs?

Like every business, retailing has its own set of pressures and concerns. All retailers want to:

♦ Increase revenue (who doesn't?)

♦ Grow overall spending per customer

♦ Attract new customers

♦ Maintain brand loyalty – keep those customers coming back again and again

In the highly competitive retail world, connecting with customers gets more challenging every day. To succeed and flourish, retailers must:

♦ Get your attention – we're bombarded with ads, how do they get you to see theirs?

♦ Set themselves apart from everyone else in the crowd

♦ Seek new customers in new locations and with new formats.

Therefore, they're always looking at new ways to promote their business. First impressions count for everything in retail. So all graphic prints that they purchase or produce must be of the highest quality.

What Are The Sales Opportunities?

Retailers have intense pressures to react quickly and they need high quality. If you're selling printing services or equipment, you should be on the lookout for:

♦ Older equipment that produces lower quality prints at a slower pace

♦ Inefficiencies and waste in their workflows

♦ Desire for reduced turnaround times

♦ Increasing print volumes

You should also be on the lookout for new applications. Offer them new ways to create effective communications to reach more customers. Also, don't forget that most retail applications will require some form of finishing: cutting, lamination, mounting, and so on. So be prepared to include those operations in your research and proposals.

Smaller, independent stores don't usually have their own print shop and often they'll create their own designs using office type programs not meant for high quality graphic design. They also have no notion of color management. Consequently, when they send these designs out for printing they're often disappointed with the results. This presents a great opportunity to "educate" them by introducing workflow and color management procedures.

Who Are The Primary Contacts?

When prospecting in a retail firm, first determine whether they're an independent store or part of a larger chain.

For independent, locally owned stores you should first go directly to the storeowner. Smaller stores usually won't have their own in-store print shop, so be sure to find out who does their advertising design and printing – because they will lead you to other likely customers.

The larger retailers, particularly retail chain stores, have their own marketing and design departments as well as their own in-plant print shops. When you're dealing with retail chains, approach all marketing executives as possible leads to a sale. And, if they're big enough to have their own in-plant print shop, be sure to find out who operates it and contact them directly.

Chapter 2 – Manufacturing

Manufacturing plant

All manufacturing stages use technical drawings to complete their work. In the simplest state:

❖ Engineers create design drawings for new products.

❖ Production workers use assembly drawings to build them.

❖ Support personnel use service drawings to maintain and repair them.

"Back in the day" engineers and designers drew their documents by hand – using pencil and paper! They made copies ("blueprints") in a central reprographics (repro) shop and distributed them to the users. In the 21st century they create digital drawings using CAD systems. Document management systems can automatically feed the digital files to the users. Printing has moved out of a central repro shop and users print them at their point of need.

Many manufacturing firms use graphic arts as well as technical documents. So they present a wide range of opportunities for wide format document solutions. But their heaviest emphasis is on technical documents. If you're selling wide format solutions or prints – be sure to inquire about both!

Manufacturing Types

Manufacturing comprises two types: Discrete and Process.

Automobile assembly line

Discrete Manufacturing

Discrete manufacturing produces tangible, durable products. This would include things like automobiles, electronics, household goods, and so on. The production of discrete products requires the use of machining and assembly drawings. You could expect to find several multi-sheet drawings for each assembly and sub-assembly level. Think of all the parts in an automobile – each one requiring its own set of drawings. In addition to the various drawings, there would be specifications – although those would most likely be prepared as narrow format documents (e.g., A-size, A4-size).

Chemical plant

Process Manufacturing

Process manufacturing produces consumables like chemicals, paints, cleaning fluids, petroleum products, and so on. Process manufacturers use many facilities and specialized equipment drawings. For example, if you look at this photo of a chemical plant, you can see lots of

pipes, etc. The workers didn't just install those pipes and connect them together anywhere they pleased, you can be sure there were drawings showing exactly how to do it.

Because of the many parts and assemblies that may go into producing hardware products, discrete manufacturing generates many more wide format technical documents than does process manufacturing.

Manufacturing Production Modes

Manufacturers typically operate under either two production modes:

❖ Build To Order – they build products to customer specifications (often using customer drawings), and

❖ Build To Inventory – they design and manufacture their own products according to market and sales forecasts.

Print Workflow In Manufacturing

Most manufacturers of any size can produce their own technical documents in-house. Depending on their size, they may have in-plant capabilities for their graphic arts needs as well. Many will outsource their most challenging print needs to commercial printers, especially when preparing for trade show exhibits.

For those who print their documents in-house, their workflow follows either of these models:

♦ "Print-then-distribute", or

♦ "Distribute-then-print".

```
From          Request
user
                 │
                 ▼
           Locate
Print      documents
Shop          │
              ▼
           Print
           documents
              │
              ▼
           Send to
           user
```

Print, then distribute
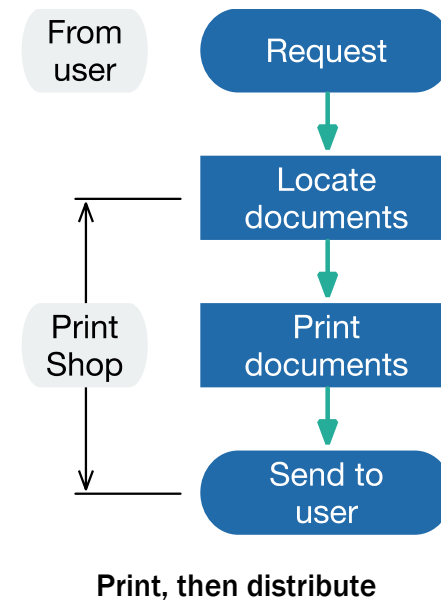
In the "print-then-distribute" model, document requests come from the users, get printed by the central print shop, and then sent to the users. Until the age of digital documents, this was the only mode of operation. When all documents were hard copy, stored in a controlled location, and they could only make copies (not prints), it was the only way to do it. Although we've entered the digital age, you can still find this model in use throughout the world.

Distribute, then print
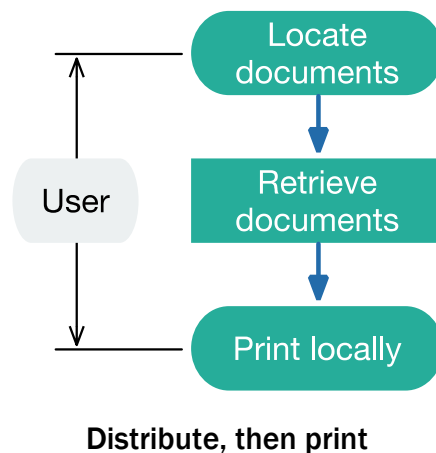
In the "distribute-then-print" model, users pull the documents they need from the company's document management system and then print them at a local printer. This mode of operation has become the most common today and it only works with digital documents. It also means that manufacturers need more printers at more locations, although they may be replacing centralized,

high-speed, high-volume printers with lower-speed, lower-volume models.

What Are Their Typical Applications?

Common technical document applications in the manufacturing market include the following.
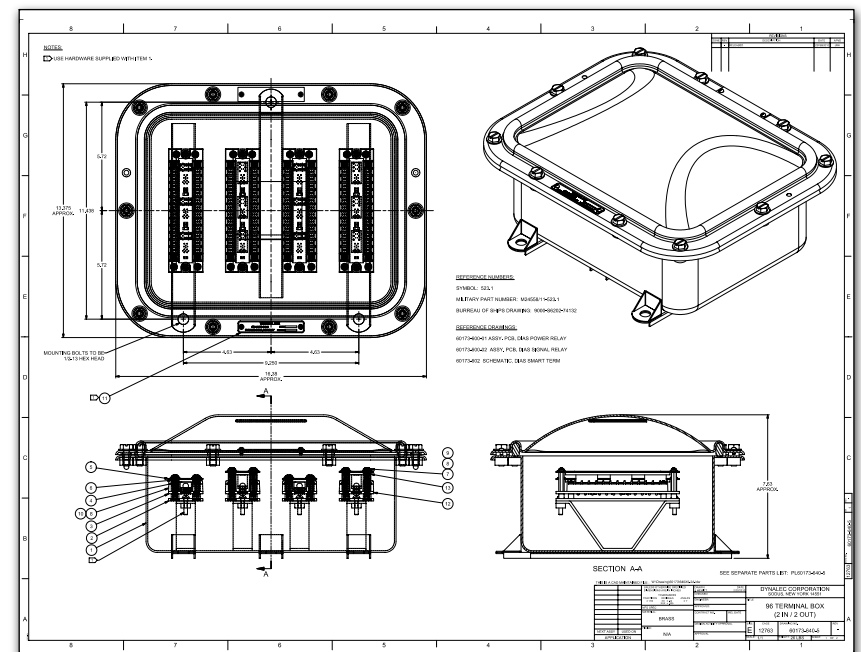
Assembly drawing courtesy of Dynalec Corporation, Sodus, NY

Assembly drawing

❖ Assembly drawings – to show production workers how to assemble the intermediate assemblies and final product. For example, in the case of a television set

this might include all the printed wiring assemblies, the display, the case, and so on.
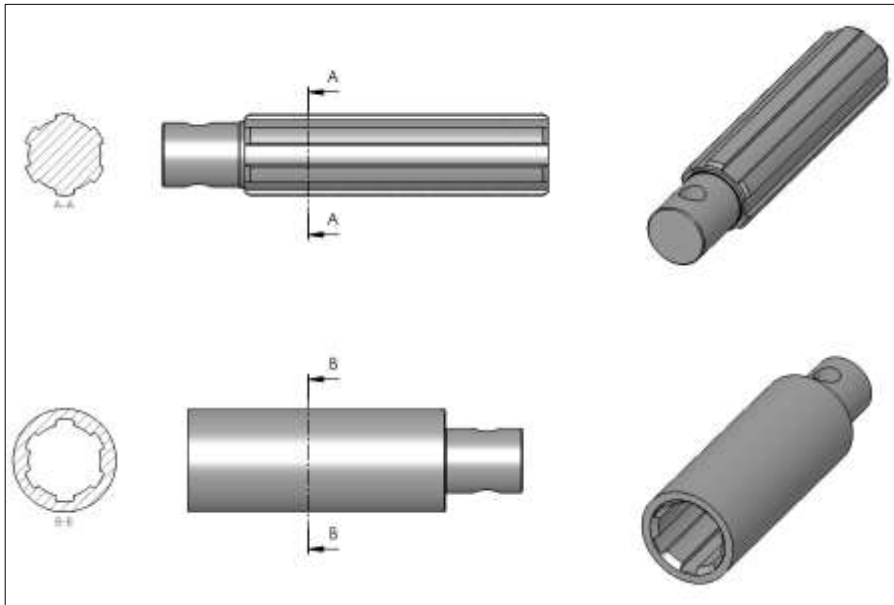
Machining drawing

Spline shaft section drawing created by Silberwolf, licensed under CC BY-SA 2.5

❖ Machining drawings – to show metal workers how to fabricate metal parts, castings, and tools. They'd create similar drawings for producing parts made of plastics and other materials.
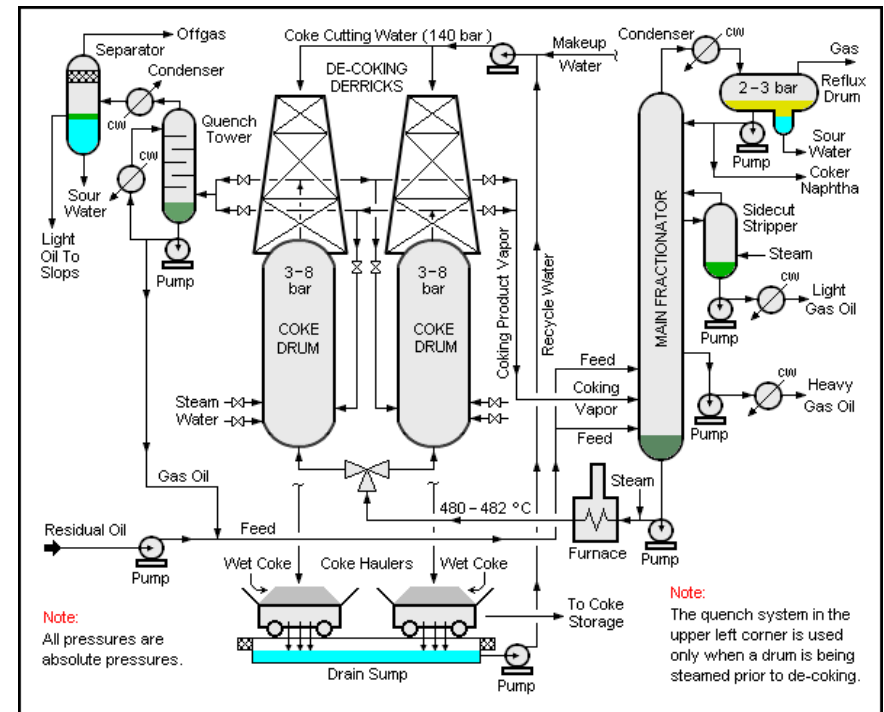
Process drawing

Delayed Coker process drawing By Mbeychok (Public domain)

❖ Process drawings – to show production departments how to assemble the equipment, piping, etc., needed to produce consumables. For example, there would be construction diagrams showing how to assemble all the piping and equipment needed to create motor oil from raw petroleum. There would also be documents describing what materials are needed and how to mix them.

Electrical diagram

Facilities drawings

❖ Electrical diagrams and schematics – when the products include electronics. These diagrams get used by test personnel during manufacturing and by maintenance and support personnel after a product ships.
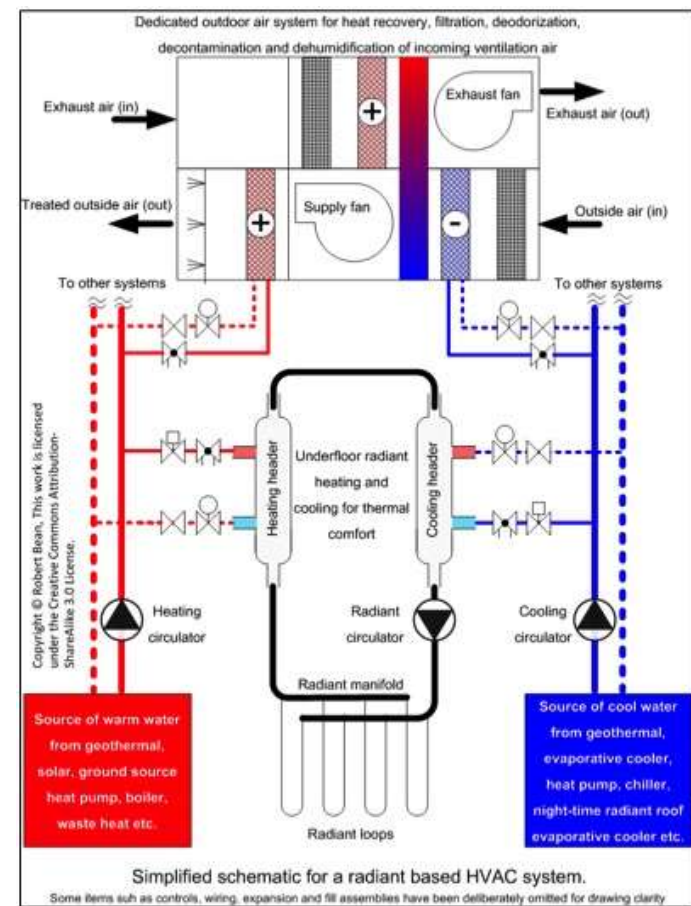
❖ Facilities drawings – because manufacturing always includes a "factory", there will be drawings showing all the various support elements needed such as electrical, air, and water supplies. Plus, there will be drawings showing the layout of the production lines. Imag-

ine all the drawings needed just to create the assembly lines that make up an automobile manufacturing plant for a single car model. Those production lines aren't laid out by casual accident.

Safety poster

The manufacturing market also uses graphic arts documents as well. These are common: posters, banners, and signage. These are often for trade show exhibits and displays but you'll also find them in the production areas of the plant and in the lobby areas to welcome visitors. They often outsource the entire design and production of their trade show exhibits to specialty firms in that industry.

What Are Their Worries, Wants, And Needs?

Manufacturers that build-to-order deal with pressures to increase productivity by reusing drawings and reducing manufacturing time. Those that build-to-inventory deal with pressures to forecast accurately, timely production, and inventory management.

Some other pressures:

♦ Global competition is an everyday fact of life for all manufacturers. They all want to improve their time-to-market and reduce costs.

♦ Customers always want faster, better, and cheaper products. They're looking for custom products and services, and immediate support.

♦ Globalization brings more regulations and standards, meaning that they need to develop compliance strategies and keep current with technology.

♦ Technology changes happen quickly and requires investment to maintain and increase market share.

Like all wide format customers, they want and need high quality prints. But their technical documents don't need the same quality levels that you'd expect for their graphic arts documents.

Technical documents demand accuracy. They might "live with" color shifts in an assembly drawing, but the data shown must be absolutely accurate. Errors in technical documents can result in extremely costly errors in manufacturing. You've no doubt heard of manufacturers recalling products already shipped to customers.

Traditionally, most technical documents have been printed using monochrome equipment – producing black and white prints. But lately there's been a shift to producing them using color equipment as manufacturers begin to appreciate the value of color and the cost of producing color prints has been more affordable.

What Are The Sales Opportunities?

The pressures they face directly drive your opportunities. Look for the following:

♦ Older equipment that slows down print production and produces poor quality prints

♦ Inefficient print production and distribution processes

♦ Need for reduced turnaround times – especially with high quality graphics applications

♦ Increasing print volumes

Large stores of older (hard copy) documents that need to be converted to digital format for adding to their archives.

Anything that can improve their print production and distribution – especially if you can speed up their production and distribution – is the most likely opening in the manufacturing market. Replacing multiple graphics and monochrome printers with single high speed inkjets that can do both will be attractive to them.

Their print processes can be improved by the inclusion of finishing devices (folders) for technical documents. For their graphics prints they may need other types of finishing such as lamination, cutting, or mounting. Be sure to include these.

Who Are The Primary Contacts?

document needs – you should most definitely visit that area to contact its manager and operators. They'll have the greatest insights into what problems that you can provide solutions to.

When prospecting in a manufacturing firm, you should be looking for anyone who may influence some or all purchasing decisions. This would include all of the following:

♦ Project managers

♦ VP's of engineering, production operations, and marketing, administrative services

♦ IT directors

♦ Service managers.

And, since it's common for manufacturers to have their own internal print shop – particularly for their technical

Chapter 3 – Trade Shows, Exhibits, and Events

Activity in EXPO Hall by National Retail Association licensed under CC BY-SA 2.0

Trade shows and exhibitions are an industry all by themselves. They take no holidays – every day, year round, there's shows, exhibits, and public events – worldwide. They're a fantastic opportunity for printers because every show and exhibitor needs signs, banners, and display graphics. The show's facility also needs its share of signs and banners and no venue is too small to ignore.

Businesses and organizations gather at trade shows to reach large, focused audiences. And the attendees come because they already have an interest in the products or subject of the show. Because what's displayed represents the business and its products to prospective clients, it must be of highest quality.

Trade shows, exhibits, and events managers for smaller venues often outsource their printing to commercial print firms – and we'll cover those printers later. But the larger convention centers, exhibit halls, and special event producers have their own in-plant print shops and enjoy the profits gained by selling prints directly to their exhibitors.

Some firms specialize in providing end-to-end trade show services for exhibitors. They'll design the customer's exhibit and produce it – including all the printing and manufacturing of displays, stands, and booths. They'll even transport it, assemble it at the show's site, tear it down, and warehouse the materials for future use.

Because show and event organizers need to advertise and promote to attract visitors, they too need banners, posters, and prints – aside from those needed by the exhibitors.

What Are Their Typical Applications?

You'll find the following typical applications at all trade shows, exhibits, and events.

"Go to the Community" Photo by Doug Kline, licensed under CC BY-SA 2.0

Booth graphics

❖ Booth graphics – every booth at trade shows has wide format graphics on display, some have dozens. They get hung from poles, racks, and on table fronts.

"Best of Broadway series" photo by North Charleston, licensed under CC BY-SA 2.0

Lobby banners

❖ Custom signage and banners – every exhibitor needs to display their brand identity. To help draw visitors into their area they'll hang their banners high above the show's floor. And the event organizers need signage as well – to help guide visitors.

Floor signage (decals)

❖ Floor graphics – to help direct the flow of traffic around the show and to draw visitors.

Banner stands

❖ Textile banners – are often mounted as "banner stands" – as shown here. They're very popular with

the exhibitors, because they can roll them up into a self-contained carrier for re-use at the next show.

Sports And Entertainment Venues
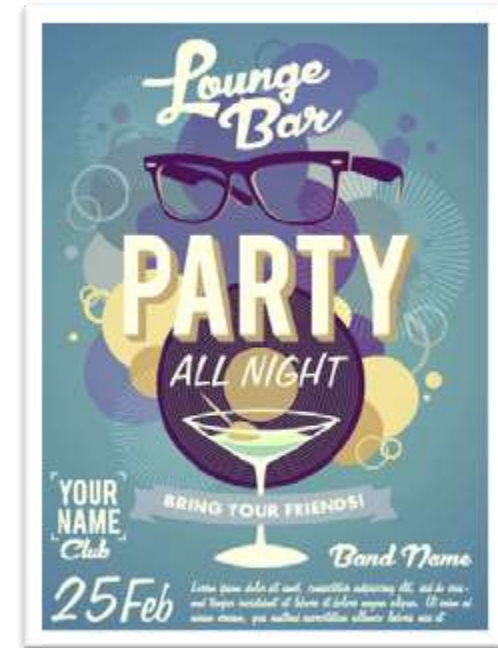
But it's not just trade shows and exhibits. If you think of all the advertising, signage, posters, and banners produced for sporting events, concerts, and theater venues – you can see that they can be every bit as good an opportunity as trade show vendors.

Concession stand signs

What Are Their Worries, Wants, And Needs?

♦ Turnaround time – everyone involved with shows, exhibits, and events gets driven by the need for quick turnaround times. There's always last minute changes to deal with in temporary, short term events such as trade shows and exhibitions.

♦ Reduced costs – customers want cheaper exhibits, producers want reduced printing costs to increase their profit.

♦ Regulations – consider that all trade shows and exhibitions take place in public buildings with hundreds or thousands of attendees milling about. That means fire and safety regulations must be complied with. And therefore exhibitors and printers must take extreme care in choosing the materials for their prints, banners, and signs.

♦ High quality output – well managed workflows that take color management into consideration.

♦ High workforce turnover – keeping skilled workers.

What Are The Sales Opportunities?

The pressures they face directly drive your opportunities. Look for the following:

♦ Older equipment that slows down production

♦ Inefficient and costly print production processes

♦ Need for reduced turnaround times – especially with high quality graphics applications

♦ Increasing print volumes

Today's high speed inkjet printers can help printers produce better quality output. And if you figure it the ability to produce far more output more quickly than ever before – a quick return on investment in new equipment can provide quicker and greater profits.

Finishing (lamination, cutting, mounting, grommets, stitching, etc.) constitute a big part of preparing graphic prints for this market – don't forget them!

Who Are The Primary Contacts?

If you're working with trade show exhibitors or event planners, it's best to contact managers at all levels – especially those involved with marketing, promotions, and advertising. And don't forget agency designers – they can provide links to those doing the printing.

When working with trade show and exhibition service firms designing and producing exhibits, be sure to contact the production and print services managers.

Chapter 4 – Government

Government building

Governments provide tax-funded services for public works, public safety, infrastructure (water, sewer, etc.), education, transportation, recreational services, and community development. This may include the outfitting and maintenance of military activities required for defense.

Depending on where you live, governmental divisions include national, state, province, and local counties, towns, villages, and so on. Some governmental divisions use private or public companies in management roles (e.g., highway operations may be outsourced to a private firm).

The citizens place intense pressure on all governments to control their costs – because those costs drive taxes. But at the same time, citizens want increased service levels and more highways, and so on. To meet these demands and pressures, governments must improve efficiency and implement time- and money-saving procedures while still reducing costs.

Most governmental agencies, especially at the higher levels, have their own in-plant print facilities, but may outsource some of their print needs.

Decision makers may be elected, appointed, or civil service personnel or a combination of all. They usually make purchases by a formal contract process and those purchases and processes are almost always open for public review.

Government activities cross many market segments, from transportation to education to health services, and so forth. Whatever the level of government, it differs from private business in that it is ultimately managed by elected officials and funded by taxpayers. This has a major effect on how you do business with governmental units.

What Are Their Typical Applications?

Governmental agencies use both graphic arts and technical documents.

Poster

Typical graphic arts applications include:

♦ Informational and promotional materials for the citizens, and

♦ Banners, posters, and signage for both indoor and outdoor use.

Technical document use includes maps of all kinds – simple maps, land use and tax maps, road maps, and so on.

Maps

Construction drawings

For existing infrastructure and for new construction, governments need many architectural drawings and renderings for buildings, roads, and bridges.

To award projects based on competitive bids, they use "bid sets". Bid sets contain all the drawings needed to complete a project. These get sent to prospective contractors to gather proposals and tenders. Once they award a contract, they also need to send complete sets of the most current drawings for any project – and provide revised drawings during the course of the project.

Because governments involve buildings, they will also have facilities drawings for each site to include electrical, plumbing, heating, and ventilation plans.

Military – ships

For the military – there will be even more of these types of drawings because each military installation has its own infrastructure: buildings, electrical systems, and so on. Plus, defense agencies and departments create millions of wide format drawings during the development and deployment of new weapons systems, aircraft, and ships.

What Are Their Worries, Wants, And Needs?

Government agencies at all levels want to:

❖ Reduce costs – the loudest citizen cry of all!

❖ Increase services – everyone wants more and better roads, bridges, and infrastructure – just as long as it doesn't raise taxes

❖ Improve turnaround times – everyone wants their prints yesterday

But they must also deal with laws and regulations – these figure into their pressures too, because they constrain what they can and can't do. For instance, they may have laws that limit their procurement choices. The need to meet certain standards may limit their ability to move quickly to new methods and techniques.

What Are The Sales Opportunities?

Look for the following:

♦ Older, slow, low-quality equipment – newer equipment can save them time and money!

♦ Inefficient print production processes – that are costly

♦ Need for reduced turnaround times – especially if it can save them money

♦ Cost reduction campaigns – ever popular!

Be prepared to run into entrenched bureaucracies – government agencies are notably resistant to change. Today's high speed inkjet printers can help printers produce better quality output. And if you give them the ability to produce more output – faster and cheaper than ever before – and show them how it will reduce costs (their number one driver) you can persuade them to make the investment.

Who Are The Primary Contacts?

When prospecting in this market, check government websites and public information offices to find directors and managers at all governmental levels, including:

♦ Public Works

♦ Public Relations, and

♦ Administration services

Since most governments and their agencies have their own official print departments – especially at the higher levels, you should make every effort to contact the managers and operators of those facilities.

Chapter 5 – Education and Institutions

Education

Increasing populations and the drive for education beyond high school have made education one of the largest industries in the world. Some of it's public, some private, but overall it's the same market.

Many educational institutions, particularly universities and large public school systems, have their own in-plant print shops. Some operate their in-plant shops as profit centers by selling print services to the public.

Medical

Many big hospitals produce prints for wayfinding, pharmaceutical departments, and medical device meetings at the hospitals.

What Are Their Typical Applications?

Institutions, depending on their level and focus, use both graphic communications prints and technical documents.

Sports banners

Typical graphic communications for colleges and universities include: banners, posters, and signage for events – such as sports and cultural events and art shows. Lower level education institutions may not have as broad a requirement for graphic communications products – and if they do, they probably outsource to a local print shop.

Hospital directory

Hospitals also produce banners, posters, and signage.

Although both educational and medical institutions produce far more graphic arts documents, most also have use for technical documents. Common usage would include facilities and construction drawings - similar to those used by governmental agencies. Higher level educational institutions, especially those focused on technical education would also generate plenty of student drawings in architectural and engineering programs.

What Are Their Worries, Wants, And Needs?

Some pressures for educational facilities at all levels include:

♦ Reduced costs – you'll hear that cry everywhere, particularly at publicly-funded schools!

♦ Cut backs in school budgets – got to keep those taxes down!

♦ Shorter turnaround times

♦ Regulations – like trade shows and exhibitors in public places, regulations figure into that list. They must comply with all fire and safety regulations. So they must take extreme care in choosing the materials for their prints, banners, and signs.

What Are The Sales Opportunities?

Look for the following:

♦ Older equipment

♦ Inefficient print production processes

♦ Need for reduced turnaround times – especially with high quality graphics applications

♦ Cost reduction campaigns – especially in publicly-funded institutions

Today's high speed inkjet printers can help printers produce better quality output. And if you give them the ability to produce more output – faster and cheaper than ever before – and show them how it will reduce costs (their number one driver) you can persuade them to make the investment.

Also, if they're not already offering printing services to the public – it would be beneficial to point out to them that they can turn a profit by doing so. If staffed by students, they can justify it on the basis of providing useful life experience as well.

School hallway signs

Who Are The Primary Contacts?

Call on management at all levels, including:

♦ Chancellors, superintendents, and principals

♦ Department heads – especially for school museums and art galleries

♦ Athletic directors and special events directors

♦ Print shop managers and operators

Chapter 6 – Architectural - Engineering - Construction (AEC)

Construction workers with drawings

The Architectural – Engineering – Construction market, more commonly called "AEC", offers many opportunities for wide format graphic communications and technical document printers and hardware vendors.

This market breaks into three general categories:

❖ Architects – who design buildings, land use sites, and facilities,

❖ Engineering and Consulting Firms – who will provide everything from design through construction, and

❖ Construction Companies – whose only interest is in building for others.

AEC firms come in all sizes. The large ones usually offer more comprehensive services from design through construction. The smaller firms tend to specialize in narrower services. They all serve both the public and private sectors and usually operate on a project basis. Some may also offer facility management services – for example the operation of office buildings that lease space to tenants and which may also include managed print services. Most use subcontractors, building contractors, equipment suppliers, and landscapers, and so on.

Large construction site

They're highly computerized these days – although many architects still like to work with pen, ink, and paper during the early, conceptual design phase of projects. Many are large enough to have their own in-plant print shops for their technical document needs, but may outsource their graphic communications printing.

Many high-profile architectural firms locate in high-rent locations and are therefore reluctant to devote prime floor space to engineering reprographics and print distribution. Instead, they work closely with commercial repro-

graphics firms (also called blueprinters – print-for-pay – reprographers, etc.) who also prepare all the bid sets and construction sets needed to complete projects. They're among the heaviest users of commercial reprographics – and they're always looking for fast turnaround and print distribution.

Bridge construction

Most use subcontractors, building contractors, equipment suppliers, and landscapers, and so on.

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What Are Their Typical Applications?

Architectural rendering

Common technical document applications in the AEC market include:

❖ Plans and drawings – both 2-D and 3-D

❖ Renderings – give customers a view of a new design so they can see what a building's going to look like before it's built. Many architects draw these manually, without the aid of a computer, which means that they

may need to be scanned to create a printable version. They may even build scale models of new designs.

❖ Work Packets – for construction sites,

❖ Bid Sets – to award projects based on competitive bids. Bid sets contain all the drawings needed to complete a project. Subcontractors use them to make accurate estimates. Once they award a contract, they also need to send complete sets of the most current drawings for any project – and provide revised drawings during the course of the project.

❖ "As-built" drawings – show how the actual work was done on-site and the changes that were necessary to the original drawing; that is, they show the work "as built".

HOTEL AT FUJEREIH

The AEC market also uses graphic communications documents as well, such as:

❖ Proposals and presentation graphics – the first thing clients see that shows the work to be done. This is where you'll often see renderings.

❖ Posters, banners, and signage – mostly for construction sites.

❖ Trade show exhibits – to attract new clients.

What Are Their Worries, Wants, And Needs?

They face similar pressures to those experienced by other wide format customers. Special pressures include:

♦ Ever-shortening bid response times and project cycles

♦ More need to make color graphic presentations

♦ More stakeholders in making decisions (environmental and other considerations)

♦ Governmental regulations and standards

What Are The Sales Opportunities?

Look for the following:

- Older equipment

- Inefficient print production processes

- Need for reduced turnaround times – especially with high quality graphics applications

- Increasing print volumes

- Large stores of legacy (hard copy) documents that need to be converted to digital archives

- Finishing needs for both technical and graphic arts documents.

Who Are The Primary Contacts?

When prospecting in an AEC firm, focus on anyone who may influence some or all purchasing decisions. This would include all of the following:

- Company President / VP's

- Operations Managers

- Departmental managers: structures, design, environmental, transportation, mechanical, electrical, etc.

- Project managers

- Construction engineers

- Computer services/IT Managers

As mentioned, many AEC firms outsource their printing needs, especially for large volume printing. In such cases commercial repro firms are happy to pick up the work and there are numerous "planroom" software applications available that allow the AEC firm and their subcontractors to retrieve needed documents and submit them for printing – all over the internet.

Also, since many AEC firms have their own internal print shop – particularly for their technical document needs – you should most definitely visit that area and contact its manager and operators. Lastly, if they offer facilities management services be sure to check with the manager of those services to see what printing services they offer.

Chapter 7 – Utilities and Tele-communications

Power: windmills and nuclear plants

Utilities

Utilities often focus on single services, such as nuclear power plants that generate electricity – but aren't involved in the distribution. Others, however, offer combined services, such as those that both produce and distribute natural gas or electricity. Yet others search for and develop new oil and natural gas reserves.

Utility companies of all types get tightly regulated by the governments of the country they're located in. Some are even owned and operated by the government. But whether privately or publicly owned and operated, all must meet stiff standards for safe operation.

Managing maps and associating installed facilities with locations on those maps is fundamental to all utility operations. Equally fundamental is the creation and implementation of work-orders to install or update facilities.


Telecommunications antennas

Telecommunications

Telecommunications companies, sometimes referred to as "telcos" or "telecom", provide communications using telephone, television, cable, network, and wireless technologies. We're all familiar with "POTS" ("Plain Old Telephone Service") – the hardwired connection to your home that is fading away as new technologies emerge.

They install, maintain, repair, and upgrade cable and other communications pathways and equipment. Like utilities, telecom firms may be privately owned or government-owned. And, like utilities, most telco firms must comply with governmental regulations.

Unlike utilities, the rapid rise of new technologies such as cell phones and the Internet drive the way we communicate and thus the ways this industry serves our telecommunications needs. Did you send or receive a text message within the last hour?

What Are Their Typical Applications?
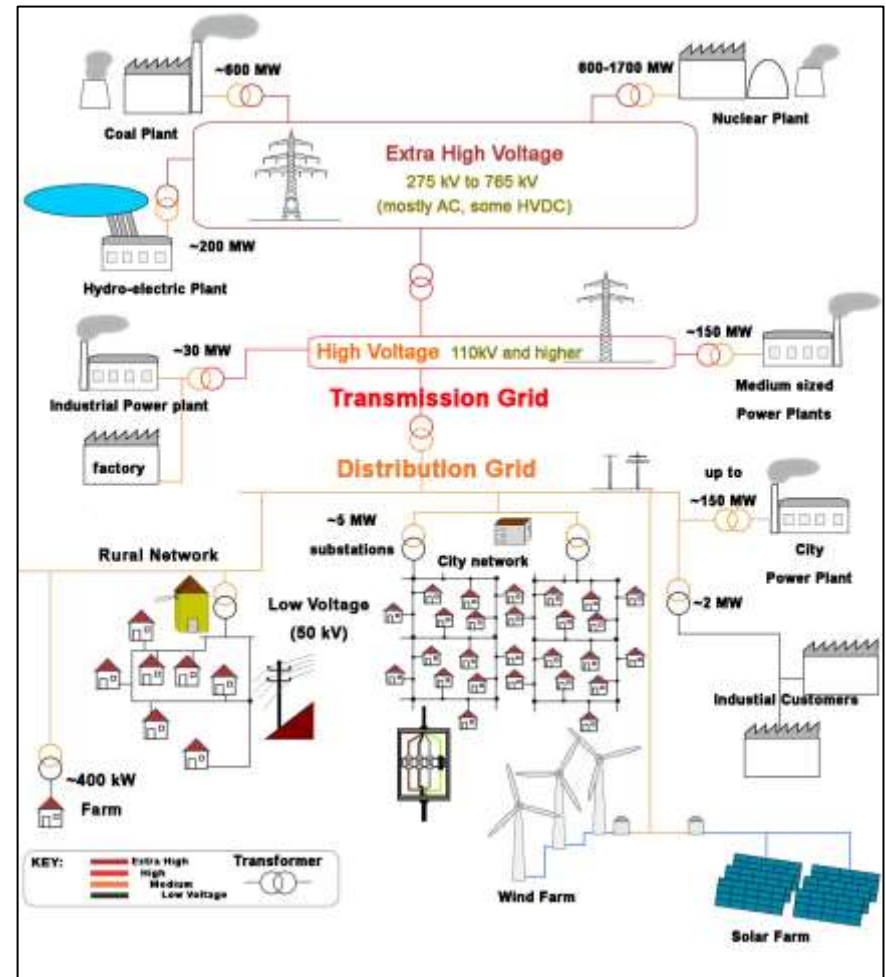
Electricity grid schema drawing by JJMesserly, licensed under CC BY 3.0

Distribution schematic

The Utilities / Telco market use many types of technical drawings to include facilities drawings and schematics,

work orders, and distribution maps – to identify locations for repair, installation, or upgrades. Some examples of key technical documents for utilities and telco companies include:

❖ **Work and Job Orders** – drawings and instructions for construction and repairs

❖ **Distribution Maps** – to identify plant and equipment locations for repair, installation, or upgrades

❖ **Disaster / Storm Books** – drawing packages containing all service maps corresponding to areas covered by the utilities transmission and distribution lines. Most utility/telco repair trucks routinely carry these for instant reference – they can't wait to have them printed out after the disaster. These need to be current, so any time there's a change to these drawings, they'll need print out a new set.

❖ **Schematics** – A schematic is a simplified version of a map or diagram that contains no coordinates or dimensions and indicates function rather than complete details. Often this information is used during work order preparation.

❖ **Design Change Requests** – formal requests from engineering, operations, etc., to change previously ap-

proved designs in order to maintain or improve performance.

They also use some graphic communications documents as well, such as: posters, banners, signage – for public relations, trade shows, and special events, and presentation graphics.

"As Builts" – A Special Drawing Type
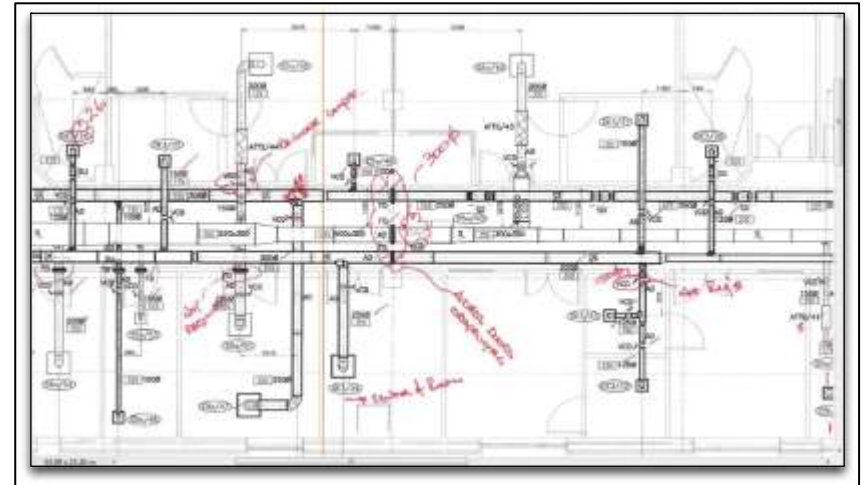
"As Built" drawing

Another technical document common to this industry is the "As-built".

When engineers design new pipeline installations or electrical distribution plans they work with topographic maps to create the best routing over and around the ter-

rain. Those maps, however, may not show what's underground.

As an example, let's picture a work crew digging long trenches to install a new pipeline or underground electrical cables. Unexpectedly, they come upon a huge impediment – say, a giant stone or outcropping that blocks their path. They can't move it, they can't blow it up – so what do they do? Do they go back to engineering and ask? No, they make a quick, simple, economical on-site decision to re-route their installation.

But now their installation doesn't reflect the original design drawings and those documents are no longer accurate. They'll mark up their copies of the originals to show the actual installation details and send them back to engineering. These marked-up drawings, showing the actual installation, are known as "as-builts". The engineering department must then revise the source drawings to match the actual installation and distribute them so that field personnel can find the actual route should they need to service that installation.

This happens in any type of construction project – not just with utilities and telcos. It happens in manufacturing when something gets modified on the assembly line requiring changes to the original drawings. It's a best prac-

tice to document these changes immediately to ensure that the documents have been managed in a controlled fashion. Where utilities must meet governmental standards and regulations, such as in nuclear power plants, this is not only a "best practice" – it's the law. Undocumented changes at a nuclear reactor site could be dangerous.

What Are Their Worries, Wants, And Needs?

Some pressures for utilities:

♦ Regulation – meaning adapting older installations to new requirements

♦ Compliance with government regulations

♦ Slow to moderate growth

♦ Mergers

For telco's:

♦ The Internet – VOIP, etc.

♦ New and competing technologies

♦ Competition and mergers

♦ Country and state/province laws

What Are The Sales Opportunities?

The pressures they face directly drive your opportunities. Look for the following:

♦ Older equipment

♦ Inefficient print production processes

♦ Need for reduced turnaround times – especially with high quality graphics applications

♦ Increasing print volumes

♦ Large stores of legacy (hard copy) documents that need to be converted to digital archives

Power plants and power lines
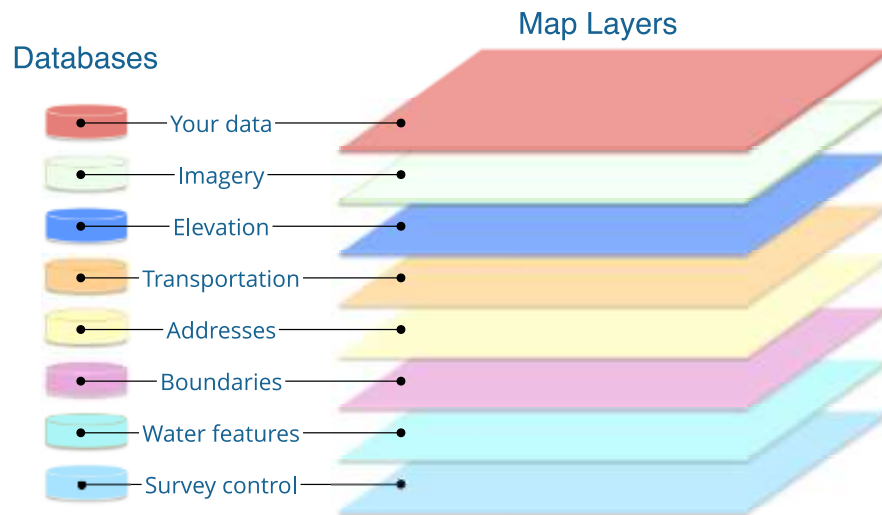
Who Are The Primary Contacts?

When prospecting in a utilities firm, focus on anyone who may influence some or all purchasing decisions. This would include all of the following:

♦ VP's and managers in these operational groups: Energy Generation, Construction, Transmission, Distribution, Service

♦ Project managers,

♦ Service managers and dispatchers

Also, because of their size, it's common for utilities and telecommunications companies to have their own internal print shop – particularly for their technical document needs. You should most definitely visit that area and contact its manager and operators.

Chapter 8 – Geographic Information Services (GIS)

GIS is its own separate industry segment, but GIS often appears as departments within the other major segments as well. Government agencies, utilities (gas and oil exploration), and telcos often have their own, internal GIS departments. Governments use GIS extensively for applications like environmental assessment mapping, forest management, political re-districting, and transportation and public utility planning.

Databases

Map Layers

- Your data
- Imagery
- Elevation
- Transportation
- Addresses
- Boundaries
- Water features
- Survey control

GIS maps: data layers

Geographic Information Systems (GIS) help us capture, analyze, and view geographically related data using software applications – and printed maps.

A computer-based GIS application extracts data from the chosen databases and arranges it in layers or overlays on a printed map. The choice of data and its arrangement by layer is up to the operator – what data needs to be analyzed and presented in this particular map or chart?

What Are Their Typical Applications?

Rapid transit route map

We're all familiar with travel maps and although we don't think of them as GIS they are probably the most common GIS application of all. Here's some other simple examples:

♦ Energy companies exploring and drilling for oil and gas use seismic maps to help them predict the best locations to drill

♦ City map overlaid with voter registrations by address could show a political party where they should spend their campaign funds
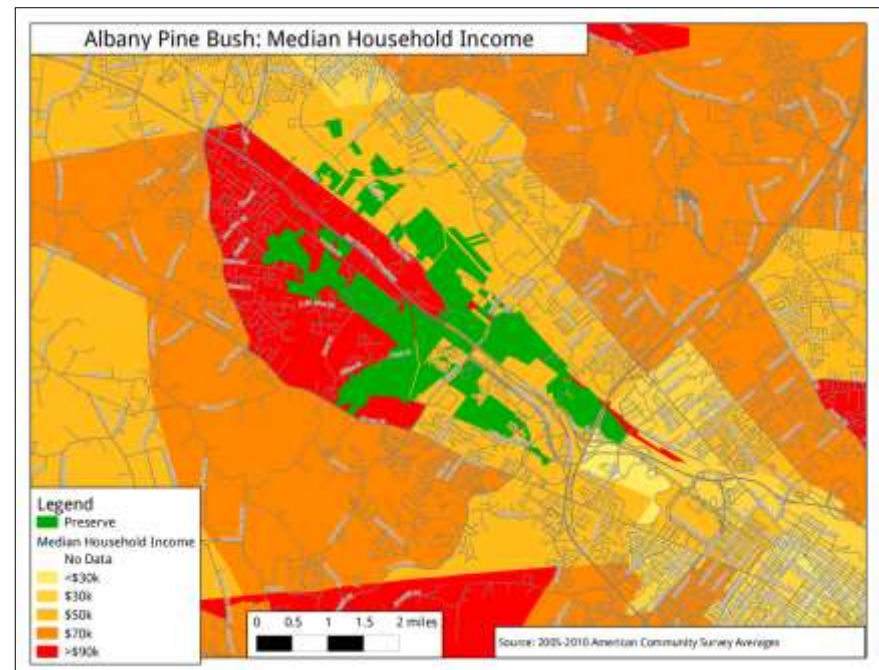
Median Household Income Map

♦ Geo-political – showing governmental boundaries

♦ Topographical

♦ Climate / weather

What Are Their Worries, Wants, And Needs?

Consider that GIS is often an application or department within an industry segment such as government or utilities and telcos and it's easy to see that their pressures become those of the larger organization they belong to.

So, for example, if it's a government agency, these would be common:

♦ Reduce costs

♦ Increase services

♦ Quicker turnaround times

♦ Laws and regulations

♦ Entrenched bureaucracies

What Are The Sales Opportunities?

Again, because GIS is usually an application or department within an industry segment such as government or utilities and telecommunications it's easy to see that your opportunities are the same as those for the parent organization.

The most common are:

♦ Older equipment that needs replacement

♦ Inefficient print production processes

♦ Need for reduced turnaround times – especially with high quality graphics applications.

Who Are The Primary Contacts?

When working with GIS, be sure to look for:

♦ VP's of research, engineering, operations, and marketing

♦ Project managers, and

♦ Public relations managers

Chapter 9 – Commercial Printing

Commercial print shop equipment

Commercial printers sell printing and finishing services to each of the market segments we covered in the earlier sections: AEC, government, and so on. And even if they have their own in-plant print shop, all print consumers occasionally buy prints from commercial printers.

Most commercial printers can provide prints for both graphics communications as well as technical documents, but some specialize in one or the other.

Indeed, some of them started as "blueprinters" before expanding their services to include high-quality graphics. Because so many of them provide narrow format printing services to their customers it's a natural movement to expand their capabilities to provide wide format solutions so they cover the entire range of printing applications: customers get "one stop" shopping.

This market must be able to deliver high quality, short-run production, and quick turn-around capabilities to meet the peak and often unpredictable demands of their customers. They also want easy-to-use products (hardware and software) because they experience high workforce turnover and can't afford to be continually training new workers in complex operations. Lastly, they demand highly reliable equipment – every minute they're not printing, they're losing money.

Commercial printers subdivide into smaller segments or types of printers – some specialize. Many of the boundaries between these smaller segments are disappearing as everyone moves to cover the full range of applications. Let's take a look at these sub-segments.

Signs along a busy street

quick print firms also have one or more wide format devices.

Impulse services are important (e.g., banners and posters "while you wait") and most of their jobs require quick turnaround. Because customers may pay up to 50% more for two-hour turnaround service, this makes it profitable.

But, their core is shifting from walk-in customers to business-to-business clients, meaning they are expanding their efforts in outside sales and marketing. They want devices to provide maximum uptime for maximum output. And they want responsive, effective technical service and support when they're down.

Market Segments

Quick and Franchise Printers

Quick and Franchise printers focus on special applications and short-run, quick turnaround jobs. Most, however, have expanded and now offer complete end-to-end services, including finishing.

This segment offers one-stop shopping and low prices. They seem to pop up on every street corner. They focus primarily on A (A4) and B (A3) sized document reproduction, both color and monochrome. But, increasingly,

Commercial reprographics company

Full-service Reprographics

Full service reprographics firms cover the spectrum of applications including digital cut-sheet and wide format applications and often lithographic printing as well. The larger firms provide end-to-end services including design, printing, finishing, and distribution. Most provide customers with the ability to submit jobs remotely via the internet. Full-service commercial reprographics is highly competitive.

Sign shop

Sign Shops

Although sign shops may focus on signage, banners, and posters for both indoor and outdoor use they may also offer very specialized print and installation services for vehicle wraps, floor graphics, and decals – all prime wide format applications.

Vehicle wrap

Screen printing a T-shirt

Screen Printers

Traditionally, screen printers have limited their services to specialty items like garment and fabric printing and branded novelties like mugs, pens, and notebooks. But, like everyone else they're moving to expand their capabilities to include lucrative wide format printing.

Facilities Management

Facilities management firms are devoted to the maintenance and care of commercial or institutional buildings, such as hospitals, hotels, office complexes, arenas, schools or convention centers. Sometimes they own the buildings and lease the commercial space. Often, they provide contractual document services to manage on-site customer operations providing:

♦ Centralized printing, or peak load or backup services

♦ Complete print-distribute or distribute-print services

♦ Continuing hard copy to digital conversion services.

Trends in the facilities management industry include providing:

♦ On-site services customized to business needs

♦ Shared services for special needs

♦ Bid set preparation services for contractors

♦ Construction work packet preparation by phase of project, function, etc.

What Are Their Worries, Wants, And Needs?

Their concerns are similar to many businesses these days. But specifically, they're seeing increasing local competition – everyone's getting into the act these days because everyone thinks it's easy, like printing money, even if it's not.

And competition from big, inexpensive Internet printers is commonplace now – you know, just log on, send a file, and get your prints a few days later. They also face ever-increasing customer demands for quick-turnaround and lower prices.

Finding skilled print shop operators with good workflow and color management skills.

Finishing figures heavily for commercial printers – they want to be able to deliver a fully-completed project to their customers, not just prints. Also, finishing is a highly-profitable item, often as profitable as the prints themselves.

What Are The Sales Opportunities?

Their competitive pressures drive your opportunities in the print-for-pay market. They will be open to new products and applications that can help them gain a competitive edge to attract customers and increase their profit margins.

So look for:

♦ Aging equipment

♦ Inefficient workflows

♦ Need for reduced turnaround times

♦ High workforce turnaround.

Who Are The Primary Contacts?

All of the following should be considered target prospects in any of the commercial print segments:

♦ Owners, partners

♦ Business development managers

♦ Sales managers, and

♦ Operators

Final words

I hope you found the information in this guide useful. I'd be happy to receive comments and answer any questions you may have about its contents. Please leave a comment at: http://easywider.com/newguide, or if you'd rather reach me in private, shoot me an email at john.switzer@easywider.com. I read every comment and email, so don't be afraid to drop by and say "Hi"!

Sharing

This guide took a lot of work to put together and represents years of experience. If you found it interesting and want to share it with friends I ask that – instead of sending them a copy – you send them to the EasyWider site to download their own copy. Just send them to this link: http://easywider.com/newguide.

About The Author

I'm John Switzer and I have spent over 35 years working with wide format. My first exposure was as an engineer where I worked for several years designing electronics equipment and creating engineering drawings – using a pencil, not a CAD workstation. Later I moved to technical writing and then became deeply involved in international sales and analyst training for wide format products – both as a training developer and as a classroom instructor leading "new hires".