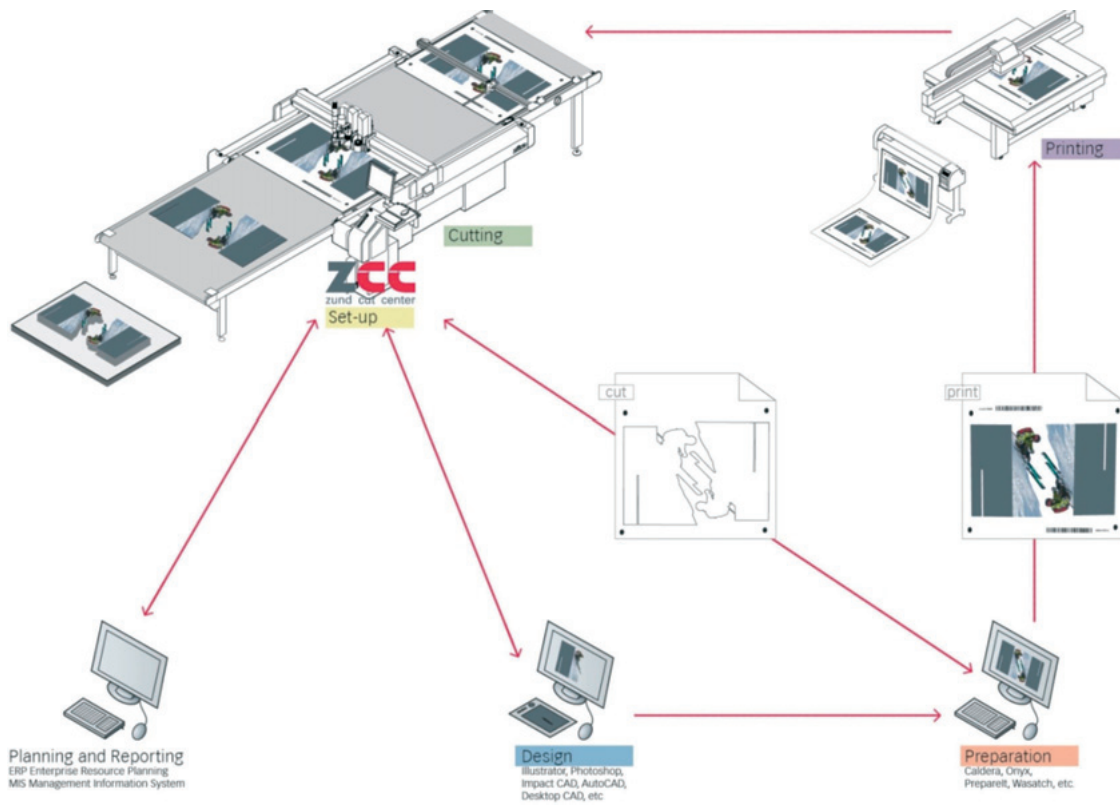


Re-Engineering the printing business

For a better position in a competitive market – Workflow reengineering might be necessary

"If I had known then what I know now, I would have bought one much sooner!" is a common refrain among customers who have decided to complement their printing capabilities with digital cutting equipment. The two do, in fact, go hand in hand.



Zund's Cut Center uses a rip-to-cut workflow allowing the Zund G3 digital cutter to automatically process printed graphics.

Just ask yourself: Could you improve your press efficiency by nesting together compatible jobs and using largest-possible sheet sizes instead of pre-cuts? If you are already maximizing your printing output, do bottlenecks in the finishing department negate some or all of these gains? Do you end up outsourcing the cutting as a temporary fix and giving up both control and a portion of your profits? Or do you simply choose to turn away jobs because you know the volume or complexity of the cutting exceeds your finishing capabilities?

All of these questions become even more pressing as customers demand ever-shorter delivery times, volumes increase, and employees working under pressure make more mistakes, increasing the need - and cost - for reprints.

Benefits of digital cutting

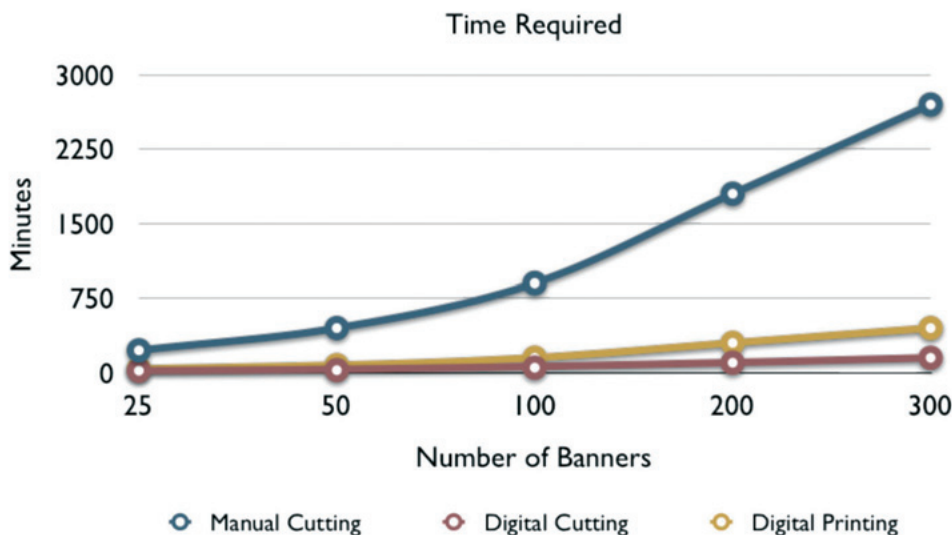
The cost of high-end digital cutting equipment makes it tempting to put off purchasing this critical companion piece to your high-end printer. Here's another look at how much this may actually be costing you:

- Labor: the most costly steps in the production process are undoubtedly those involving manual labor. Consider how much you could benefit from using your manpower more efficiently and letting equipment perform the task faster, with consistently high edge-quality, and far less waste.
- Versatility: especially higher-end cutting systems can process almost any materials commonly used for graphics applications. Digital cutters allow you to process a greater variety and more complex jobs in higher volumes.
- Added value: customers are willing to pay a premium for more eye-catching shapes and unusual materials that may be difficult to cut.
- In-house production: keeping all phases of production in-house provides greater control over production time and margins, giving you faster turn-around times and ultimately making you more competitive.

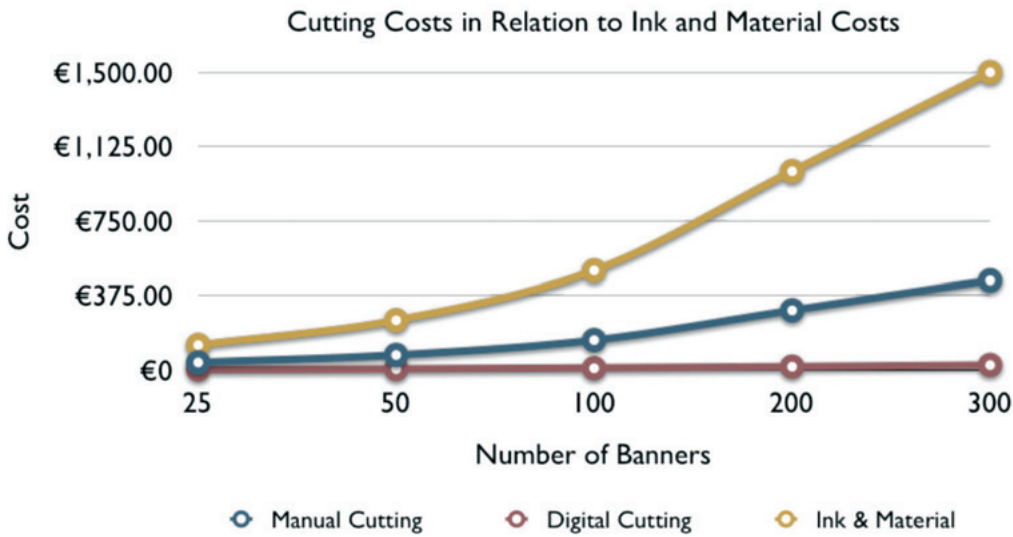
Proper finishing starts even before the job is printed. Planning software helps you get the most of your printer and your digital cutting system. As printers are capable of printing onto an ever-wider range of materials in both rolls and sheets, the digital cutting system must be able to handle a variety of different cutting tools and offer different material-handling options. It should be equally good at performing relatively simple tasks, such as trimming a square banner, and at contour-cutting thicker or tougher materials, such as 50mm foamboard or 19mm plexiglass. Although trimming prints to squares and rectangles still makes up the largest volume, being able to offer contour-cut prints will help your customers achieve far greater visual impact. Adhesive labels or decals can be printed in larger sheets or rolls, face-cut and through-cut, making the product ready for use. Rolls of banners can be processed with far greater efficiency, minimizing the time and space required for lay-up. Digital cutters often provide an avenue for customers to enter into new markets, e.g. custom packaging, either for their own distribution needs or as an added offering to their customers.

Example: 60cm x 220cm banner job

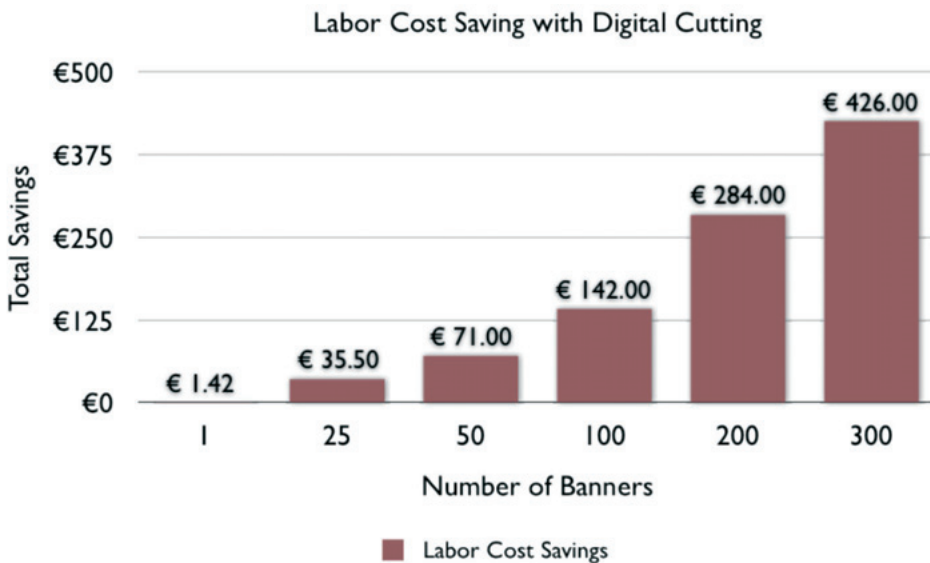
The following is an example of a banner job consisting of 60cm x 220cm (1.3m²) pieces. Based on user input, it typically takes 1.5 minutes to print a banner and 3 employees approx. 3 minutes, or a total of 9 man-minutes, to manually trim a banner. With digital cutting, the same banner can be trimmed in less than 30 seconds. The following chart compares time required for printing, manual and digital cutting. Note the dramatic divergence (bottleneck!) between printing and manual cutting, particularly with higher volumes:



Assuming an hourly rate of 10 Euro, this translates into the following labor costs (in relation to ink and material, manual cutting can equal up to 30%):



Put in yet another way, these are the savings that can be realized with a high-performance digital cutter:



Initially, most printers choose a cutting system big enough and equipped only with the tools needed for their present workload. More often than not, they begin considering the purchase of a cutter only as they get more and more into rigid or semi-rigid materials which inherently seem tougher to cut than flexibles. The above example illustrates how even with materials that seem relatively easy, the cost and labor involved in a manual process quickly become unsustainable. Consider how much integrating a digital cutter will affect your workflow as demand continues to grow. The advice is to buy larger than you think you need; if you have spare capacity, you can offer finishing services to other printers as well. It is wise to select a system that can easily accommodate upgrades with additional tools and/or more automated material handling later on. The typical lifespan of a higher-end cutting system is 15 years or more, so planning ahead is smart - and will save you money.

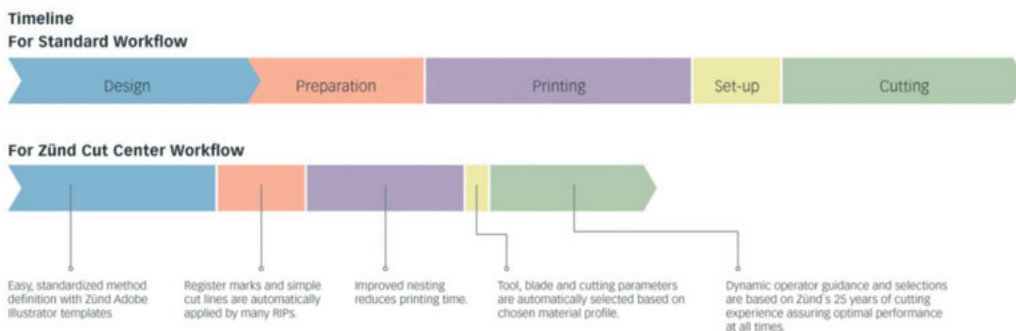
Workflow – an important piece of the puzzle

A critical component of digital cutting comes into play long before the knife plunges into the material. In the past, one cutting system could easily keep up with several of the fastest printers on the market. Nowadays, multiple cutting systems may be required to keep up with printing capacity, and if not managed correctly, the cutting workflow, rather than the cutting process itself, becomes the bottleneck. Problems tend to arise when the data flow from design (possibly an outside source) through prepress (step and repeat/nesting) to the printers and cutters is handled inefficiently. Whenever transferring print- and cut data from one area to another, reworking files, renaming files and/or layers within the files, results in saving multiple versions of the same graphic, there is a huge potential for error. Keeping track of the correct version of each file on the company's network and retrieving it for cutting become problematic. Furthermore, because of the wide variety of materials being processed, setting up the cutter with the correct tooling and parameters for the job at hand requires either a considerable amount of operator experience or costly trial and error. Cutting equipment suppliers such as Zünd have now started offering complete, intelligent print-to-cut workflow solutions (e.g. Zünd Cut Center) that help streamline the production process.

To be effective, your automated workflow should offer the following:

- Automated RIP-to-cut workflow
- Overall production management, including planning, scheduling, monitoring
- Ability to monitor and change job status, react quickly to changes
- Efficient file handling, management, retrieval and proper layer-naming structures within files
- Open platform for integration with leading RIP, ERP, CRM, estimating, job-costing software
- Expanded job-definition (JDF) protocol (such as ZCC) that includes details required for digital cutting
- Material-based, suggested use of tooling and cutting parameters associated automatically with each job
- Simple, intuitive user-interface

The chart below illustrates the dramatic time savings that can be achieved if the cutting system is integrated properly in the overall production workflow:



In a nutshell

Before making the investment in a digital cutter, most customers underestimate the benefits they can reap from integrating a good, multifunctional digital cutter into their production. Not only does it eliminate bottlenecks in the finishing department, it also helps maximize printer output and overall productivity. Having the flexibility and capacity to finish just about any graphics your customers may demand, within the timeframe they expect, and with the consistency and quality that will keep them coming back – that's what digital cutting can do for you!