

VIDEO
DIDN'T KILL
THE RADIO STAR.



AND DIGITAL DIDN'T KILL PRINT.



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in 2023.*

Sheet-Fed and Web Offset Printing Roar Back to Life

It was 1983. MTV debuted. The Death of Radio was predicted via a catchy melody. Not only is it very much alive, but who would have thought 30 years later that vinyl, also left for dead, would be alive and kicking it?

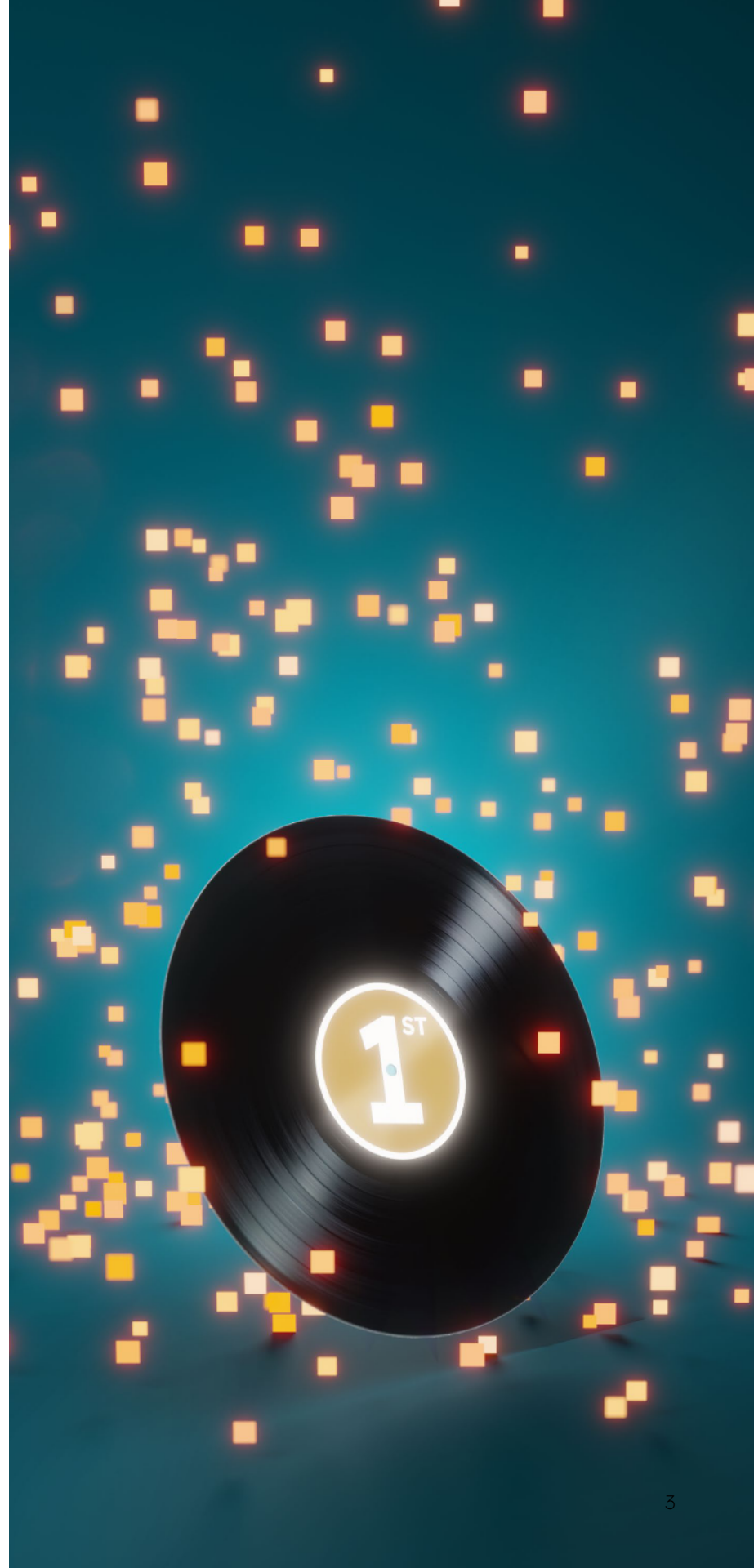
Likewise, how many times have we heard that “Print is Dead?” Nothing could be further than the living truth experienced by sheet-fed and web offset printers in 2023.

Opportunities abound. COVID-induced digital fatigue is being cured with the comforting corporeal connection that only printed materials of all types can provide. Addressing sustainability and workforce challenges is possible through technology and new modes of thinking.

We dove into the latest reporting, grilled our in-house engineering team, and talked with our customers. Here are the four big trends that will impact sheet-fed and web offset printers:

- Getting Touchy Feely
- Books are Back!
- Sustainable from Start to Finish(es)
- The “New” Nine to Five

**So,
let’s drop the needle,
press play,
and re-start the presses!**



GETTING TOUCHY FEELY

The Surrender of Screens

We may well be in the Digital Era, but there's another set of digits, namely fingers, that require attention. Print is back in full force. Personal screen time reached its peak in 2022, according to Statista.

Movie attendance is on the rebound, sports arenas are packed and breaking records, conventions and conferences are in full swing, families are vacationing together. The cure for Digital Fatigue is interactivity of all types - including with printed materials.

It turns out we human beings still like to pick up and interact with printed materials. According to the Mail Shark, direct mail spend for 2023 is forecast to reach \$38.5 billion, the largest portion of U.S. local advertising spend.



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The combination of offset printing, with its speed, brand fidelity, quality and affordability, combined with the personalization and customization provided by digital printing, is a powerhouse duo to achieve touchy feely.

But quality does not occur in a vacuum. Defects lurk within every order. Costs rise and speed decreases.

Optimal print inspections systems can arm printers with the high-tech tools to eliminate every defect through an efficient, accurate, data-connected process. These systems provide singular Object-Based Inspection during the printing process, tighter tolerances and fewer false defects. Areas of concern on the job can be defined for enhanced or reduced levels of inspection.

Press managers also need to monitor changes right as they occur, clearing the way for highly informed decision making around print quality, defect management and operator-to-operator performance and efficiency. Now, printers are able to track and

compare myriad production metrics.

Verifying that the files used for production – or the beginning-of-run press samples – match the customer-approved master file 100% is another crucial component. By comparing any pre-press file or scanned press sample to the customer-approved original in a matter of seconds, advanced software automatically locates and highlights even the smallest of differences in print quality.

BOOKS ARE BACK!

New Chapters for Printers

Things looked pretty dire for the traditional book industry. The number of books sold declined by 24.04% from a record high in 2008 to a record low in 2012.

According to Booksrated.com, more than 788.7 million copies of printed books were sold in the United States in 2022, more than 100 million copies compared to the pre-pandemic period – the second-highest sales mark for printed books in the 21st century.

After so many fallow years, book printers can meet the needs of publishers and exploit these new growth opportunities with smart upgrades and retrofits to their existing offset presses.

The technology is here. And here are just a few.

100% water-cooled LED UV curing systems are gaining in popularity. Multiple rows of LED

chips create a powerful beam of pure UV with built-in redundancy for increased reliability.

The cure performance in LED UV printing is dependent on the UV intensity and dose delivered to the sheet. While standard LED systems have slowly degrading intensities over distance, new application-specific optic and reflector arrangements are delivering the same high intensity in each position.

A recent addition to the Baldwin suite of products is ribbon control equipped with cameras. It delivers unmatched precision across the full range of ribbon-control tasks – including everything from cutoff, print-to-cut, print-to-fold and crossover register to the most complex challenges.

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SUSTAINABLE FROM START TO FINISH(ES)

Save your Energy

Sustainability demands reflect a perfect storm. They are the collision of consumer preference, forthcoming regulation, and environmental, sustainability and governance (ESG) commitments from brands large and small.

According to Futurum Research's 2022 of business leaders, "more than 70% of companies say they are increasing sustainability spending over the next 12 months, while only around 2% are planning to reduce it."

Key priorities include boosting energy efficiency and transitioning to less carbon-intensive sources, while emission reduction and increased recycling cutting emissions and recycling materials have also gained momentum.

The U.S. Federal Trade Commission proposed in March 2022 new "climate-related disclosure requirements for public companies. Proposed rule amendments require public companies to provide certain climate-related financial data, and greenhouse gas emissions insights, in public disclosure filings."

Technology upgrades are true riders in the sustainability storm for printers looking to meet all of these sustainability requirements.

LED UV curing systems **consume approximately 65% less energy** than a similar-sized mercury arc UV system and provide considerably longer bulb life than conventional systems. In addition to boosting output speed and capacity, the instant on/off process of LED UV substantially

lowers the energy usage and stresses on lamp bulbs that's inherent with conventional "always-on" UV mercury lamp curing.

Taking it a step further, operators have the flexibility to program the exact UV energy needed for changing process needs to reduce product waste, expand production capabilities and most efficiently utilize production lines. It is also possible to **turn off individual modules in multiple-unit installations to save energy without slowing production speed** or compromising quality.

Finally, corona treatment allows the converter to take a more sustainable business path, opening up opportunities in flexible packaging - especially in the case of in mold labeling (IML), which is increasingly being printed offset instead of flexo. Corona enables this market expansion because it increases surface tension and achieves a good level of adhesion for a variety of new eco-friendly inks, resulting in very high quality pictures required for IML and other flexible packaging applications.

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THE “NEW” NINE TO FIVE

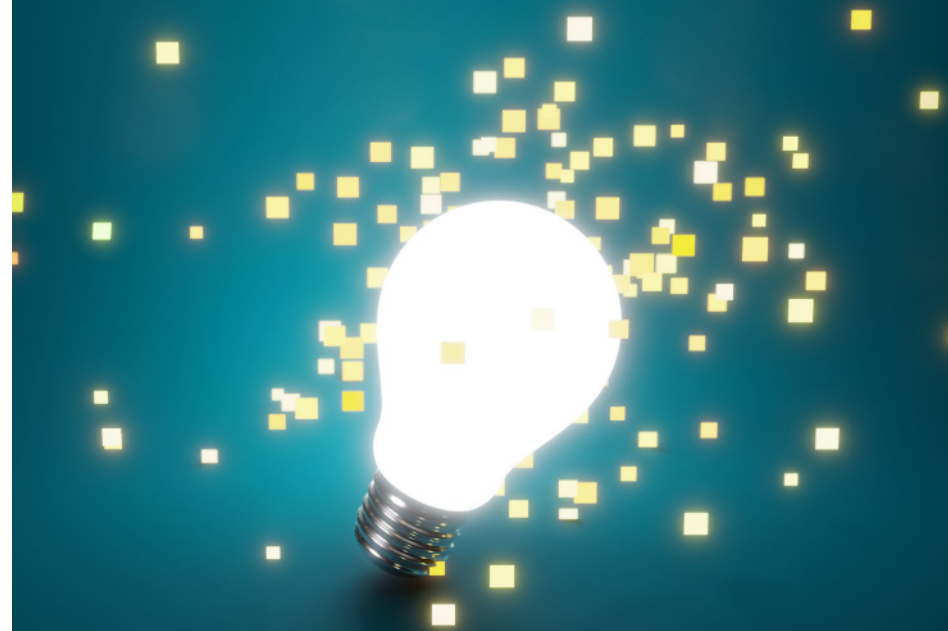
Safer, Happier Hours

The labor shortage of 2023 is exacerbated by the well-publicized retirement of the Baby Boomers, the industry’s most experienced and savvy plant managers, printers, line workers and technical experts leaving the workforce.

A Deloitte study sees an overall manufacturing labor shortage at 2.4 million by 2028. Forbes notes that “manufacturers must prepare for the long-term reality they are facing – operating with fewer people on the floor and insulating themselves from the loss of domain knowledge.”



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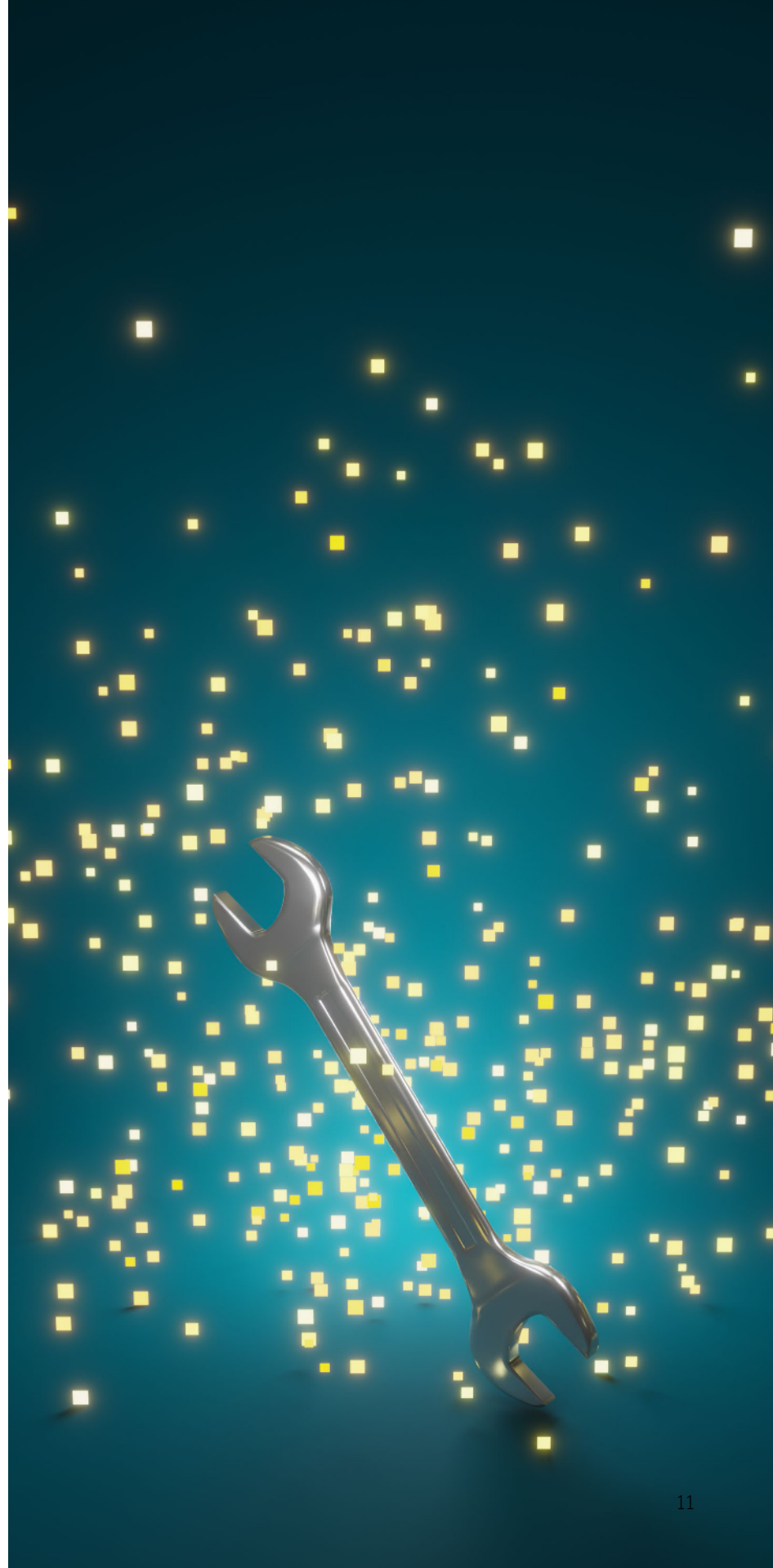


Or as a U.S. Department of Labor spokesperson so bluntly put it: “The retirement onslaught as we predicted is actually happening. You don’t have to be a genius. Just look at the age profile.”

But you also don’t need to be a genius to see what group is rapidly moving into traditionally male-dominated manufacturing jobs: Women.

According to the National Association of Manufacturers, female employment in the industry reached its height this year, with a total of 3.77 million workers. In fact, women now account for 29% of the manufacturing workforce.

Printers and OEMs are ramping up and refining their traditional recruitment activities to broaden their appeal to women and other “non-traditional”



prospects, including veterans and the recently incarcerated, through digital recruiting efforts, open houses and job fairs. While these efforts are admirable, smart automation solutions that deliver a safer and healthier work environment are another way to make up for this lamented brain drain.

Worker safety enhancements and VOC elimination are made possible with new LED UV technologies, making printers even safer and better for the new workforce.

The elimination of heat, ozone and mercury from press rooms by using LED-based UV makes them safer. LED UV also eliminates the costs generated by cooling air blowers and ozone extraction systems and the ambient noise and odor associated with other systems, further improving the work environment.

Today's latest automation solutions offer intuitive Human Machine Interfaces (HMIs) that require less equipment knowledge and more "push-of-a-button" ease of use. (The retiring Baby Boom generation manufacturing worker has been at it for 39 years - we need to make things as easy as possible for the newcomers.) This aids in more productive operations and overall employee retention. You need to get the new people in and, just as important, you need to keep them.



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THE KING IS DEAD! LONG LIVE THE KING!

It is safe to say that while Print Was Never Dead, it sure was on Life Support.

For the current renewal to continue, the industry requires not defibrillators but regular check-ups and proper medications. We are living longer thanks to technology and the same is true for the books we pick up and read, the promotions we extract from our mailboxes, the sustainable options our clients demand, and the safer and healthier workplaces a new generation of employees are looking for show that we are very much alive and kicking.

Technology investments are not a panacea – but they are profitable and productive for progressive printers in this new era of demand for connectivity of all sorts. As the industry always has, it will press forward, live long, and prosper.





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