



# Sustaining our values

In recent years, more than ever before, we have seen the climate crisis shift from a futuristic prediction to a burning reality. And as consumer awareness and regulations rise – the linear economy of take, make, and waste must be replaced by a circular economy of recycling, with careful attention to sources used. Sustainability is no longer a nice-to-have marketing advantage, but an essential requirement for business, and for preserving life on earth.

Demand for sustainable goods and for improved environmental practices is continuously on the rise, with consumers reporting that they have altered their purchasing habits to become more sustainable, and 60% of shoppers now **willing to pay more** for sustainable packaging<sup>1</sup>. Printing practices, once motivated only by improving quality, versatility and efficiency, must now be redesigned to contribute to sustainability. Consumers and regulators alike expect no less.

What does that translate into for PSPs and print converters? - It means that if they want to stay relevant and assure long-term profitability, they must engage in sustainable practices. They must examine the entire lifecycle of their product, including its material supply chain, production, consumption, and disposal to be able to deliver the positive environmental outcomes that consumers demand.

## HP Indigo's sustainable strategy

At HP Indigo, sustainability is one of our four most important company principles. Concern for our impact on the environment runs through all operational practices, and includes assuring data reliability, lowering carbon emissions, maximizing circularity in both presses and media, and complying with regulations.

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<sup>1</sup> McKinsey - Consumers care about sustainability—and back it up with their wallets



Digital printing is, intrinsically, more sustainable than traditional print. It reduces waste through the elimination of plates and cylinders, requires no minimal order quantity and enables printing just what you need when you need it, thus lowering carbon emissions.

It's fast and flexible, which means that printers can respond more quickly to demands regarding design changes, eliminating inventory obsolescence<sup>2</sup>.

Digitalization and automation contribute to sustainability by reducing ink, media and energy waste leading to circularity: a closed loop for material recovery.

### Lowering carbon emissions

In fact, digital print reduces 90% of the analog-equivalent media setup waste, which amounts to cutting 20% of the carbon footprint of the printed job<sup>2</sup>. Advanced print modes and automation setups can minimize energy consumption further, by up to 25%, using media and ink economically. Innovation in press subsystems and supplies ensure extended lifecycles and enhance resource efficiency.

HP Indigo strategically reduces carbon emissions of printing operations by designing our presses to be more productive, which promotes high efficiency and low waste, and in turn reduces energy consumption per job.

We support our customers by conducting lifecycle analyses (LCA) that provide real-life examples of the HP Indigo digital print sustainability value. In addition to previously conducted LCA tests for flexible packaging, a new LCA<sup>3</sup> for commercial product analysis was performed in compliance with ISO 14044, peer-reviewing the environmental impact of HP Indigo prints. The results clearly indicated that HP Indigo prints have a significantly lower impact compared to analog due to the reduction of offset aluminum plates and print setup.

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<sup>2</sup> A **20% reduction in CO<sub>2</sub> emissions** is associated with media savings in this context. The following assumptions were used:

- **Job Size:** 500-1000 meters
- **Analog Waste:** 200 meters
- **CO<sub>2</sub> Calculation Model:** Based on HP's model, which assumes that media production accounts for **60% of the total CO<sub>2</sub> impact**. Assuming supplies and energy impact is similar for this calculation

This reduction is due to minimizing waste and improving efficiency, leading to a lower environmental footprint for each print job.

<sup>3</sup> [LCA](#)



HP Indigo works to reduce at the source press-manufacturing-related carbon emissions, by installing PV panels, energy-efficient chillers and air handling units, while investing in projects to offset the remaining production emissions. In less than a decade, the company has invested in compensation for over 170 million kgCO<sub>2</sub>eq through offsetting projects, amounting to around 6.8 million trees every year. In 2023, **28,120** tons of CO<sub>2</sub>eq originating from press manufacturing were compensated for.

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“If it can't be reduced, reused, repaired, rebuilt, refurbished, resold, recycled or composted, then it should be restricted, redesigned or removed from production.”

*Pete Seeger*

American singer and prominent social activist

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## Brands expect circularity

### 1. Equipment circularity

By the end of 2023, 83.5% of Nestlé's plastic packaging globally was designed for recycling. Nestlé also uses recycled and renewable materials in its packaging, and by December 2023, 41.5% of its total packaging was made of recycled or renewable content. The company demands similar conduct from its suppliers, including HP Indigo with whom it cooperates frequently on creative personalization campaigns.<sup>4</sup>

A circular economy model requires adopting a new approach to print, which includes choosing materials which can easily be recycled or composted and printed with minimal waste. But recycling and reuse practices are still in their infancy. That's where digital print comes in again, with a great potential in achieving these goals.

In a circular economy, the entire production system must be reviewed and if needed reimaged, to design equipment that lasts longer and facilitates recycling. HP Indigo

has been leading environmental impact change since its inception, driving innovation that minimizes waste, maximizes efficiency and promotes robustness.

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<sup>4</sup> <https://convertermag.com/nestle-launches-personalised-kitkat-campaign-with-hp-indigo-technology/>



These principles have long been developed by HP Indigo, as explained in its Impact Report from 2023:

“HP digital presses are major capital investments for our customers, and are designed for upgradeability, repair, and refurbishment. Through firmware updates and component upgrades, HP Indigo presses used by customers are kept up to date. The HP Indigo Certified Pre-Owned program enables us to keep products in use for longer, reducing waste while allowing customers to access HP Indigo products at a lower price point. In 2023, 14% of total presses delivered were pre-owned.”

HP offers Print as a Service in our industrial print portfolio with the Indigo click charge per print and monthly service business models, which include supplies and spare parts. We continually invest in innovations to extend the lifespan of supplies and spare parts. The company also provides services to repair, renew, and upgrade our industrial print presses (more than **76%** of spare parts are reused and recycled), as well as consumable recycling and end-of-service solutions. 1,500 tons of HP Indigo ink canisters and imaging oil were diverted from landfills in 2023.

A new development in consumables soon to be released will increase savings in ink coverage, ink canisters, transporting, and shipping tenfold.

Every press sets a new standard for sustainable products, from reducing resource consumption to closing the loop on the circular economy with an extensive take-back program. For example, HP started using 100% reusable press packaging by partnering with tailor-made reusable packaging provider Eco Handling.

## 2. Printed product circularity

HP Indigo presses are compatible with a wide array of media options from FSCR-certified papers to biodegradable, compostable films which help reduce the adverse impact of economic activities on biodiversity<sup>5</sup>. HP Indigo customers can offer brands the print media types that meet their growing sustainability demands.

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<sup>5</sup> 2023 Economic factors underlying biodiversity loss *Phil. Trans. R. Soc. B37820220197*  
<https://www8.hp.com/h20195/v2/GetPDF.aspx/c08980815.pdf>



The company continually invest in print circularity compliance. HP Indigo-printed products, labels, flexible packaging, folding cartons and commercial applications are certified for recycling and compostability by accredited institutions and associations such as Cyclos-HTP, TUV, and Certico, according to relevant standards in the U.S. and EU, and regularly introduces compliance with new requirements and regulations across all printing segments.

## Reimagining print production

### 1. New technology

Bringing the digital advantages to longer jobs currently produced by analog printing, HP Indigo developed the LEP<sup>x</sup> technology. As stated in the latest HP Sustainability Impact report:

“The HP Indigo V12 Digital Press, a label press that is the first HP Indigo product featuring LEP<sup>x</sup> technology, can potentially replace two to four flexo machines for mid-length to long print jobs.

A notable benefit of the press is its capability to save substantial amounts of media by eliminating flexo printing waste. This is essential since media is the main contributor to the carbon footprint of print jobs. By transforming more print jobs from analog to digital, brands can reduce inventory obsolescence by utilizing agile production and just-in-time ordering.<sup>6</sup>”

### 2. Innovative software

Innovative software also contributes to sustainability. HP Indigo invests in continually upgrading our software operating system. The HP PrintOS is a cloud-based print production operating system that fully automates production to manage any number of print jobs simultaneously, increasing press utilization, thereby reducing setup and calibration time and media.

### 3. Total data reliability

As consumers become ever-more conscious of corporate greenwashing tactics, it is vital to partner with a worldwide leader in the print industry, which upholds a reputation (and record) that you and your customers can trust<sup>7</sup>.

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<sup>6</sup> Information based on internal HP Indigo customer reports

<sup>7</sup> More about HP sustainability: <https://www.hp.com/us-en/industrial-printers/indigo-digital-presses/environment-sustainability.html>



No less important in creating a solid sustainability plan is establishing data transparency and reliability. One example is the new calculator recently developed to enable HP Indigo customers to measure carbon emissions per print job.

Partnering with HP Indigo means choosing decades of investment and innovation that will send waves of renewal throughout your entire business. Together, we will print a more sustainable and profitable future for all of us.