



CIRCULAR ECONOMY

YOUR GUIDE FOR
PRINTING & PACKAGING



A REVOLUTION IN PRINT

A dramatic change is underway in global industry. In the utilities sector, energy from renewable sources is now more accessible and affordable than that from fossil fuels. In transport, tens of millions of electric vehicles roam the world's roads – when a decade ago they were almost unknown. In finance, some \$31 trillion¹ of funds are held in so-called 'green' investments.

This revolution is dramatic, disruptive, and driving forward at an unprecedented rate. And it is starting to gain traction in the print and packaging industries too. We are seeing ever more companies take a 'circular economy' approach to the way they produce packaging and paper products which is significantly more sustainable than the current norm. More materials than ever are designed to be reused and recycled – and traditional forms of packaging that are not easily reused are being displaced.

A circular economy involves taking a new approach to print – by using materials that can be easily recycled, packaging that can be composted, and by using printers and machinery with low or no carbon footprint. While this development is exciting, obstacles remain; rates of recycling and reuse are still relatively low in much of the world. In the EU, for instance, only 56% of waste is recycled.²

IN THIS eBook, WE LOOK AT HOW YOUR BRAND OR PRINTING BUSINESS CAN ENGAGE WITH THIS NEW APPROACH TO PRINT.

“ANYONE WHO BELIEVES IN INDEFINITE GROWTH ON A PHYSICALLY FINITE PLANET IS EITHER MAD, OR AN ECONOMIST”

**KENNETH BOULDING,
FORMER PRESIDENT OF THE AMERICAN ECONOMIC ASSOCIATION³**



YOUR JOURNEY TOWARDS A CIRCULAR ECONOMY

WHAT HAPPENS TO YOUR COMPANY'S
PRINTED MATERIALS AND PACKAGING
AFTER THEY'VE BEEN USED?

LINEAR ECONOMY

For the last two centuries, the dominant production model in the industrial world has been one of 'take, make, waste.' Raw materials are extracted, transformed into goods and, finally, deposited in landfill. However, we now know that this model is simply not sustainable in the long term.

RECYCLING ECONOMY

In recent decades, recycling has become more common and many goods are reprocessed through at least one or two cycles before eventually being wasted. This is an improvement, but there are now growing calls for an economy based on 'circularity.' In a circular economy, our production system is reimagined so that components and products are reused and repurposed several times over.

CIRCULAR ECONOMY

A circular economy would have enormous benefits – one estimate suggests humanity could cut carbon emissions by up to 44%⁴ if we implemented this model. Nature would thrive too – with fewer resources extracted and less waste dumped in oceans, nature would be able to 'bounce back.'

And this is something that consumers expect:

92% of respondents to a recent survey said that sustainable business practices should now be standard.

9 OF 10 people believe brands have a responsibility to take care of the planet.⁵

SINGLE
CYCLE
PROCESS

REPURPOSE
CYCLE
PROCESS

Resources

Resources

Resources

Waste

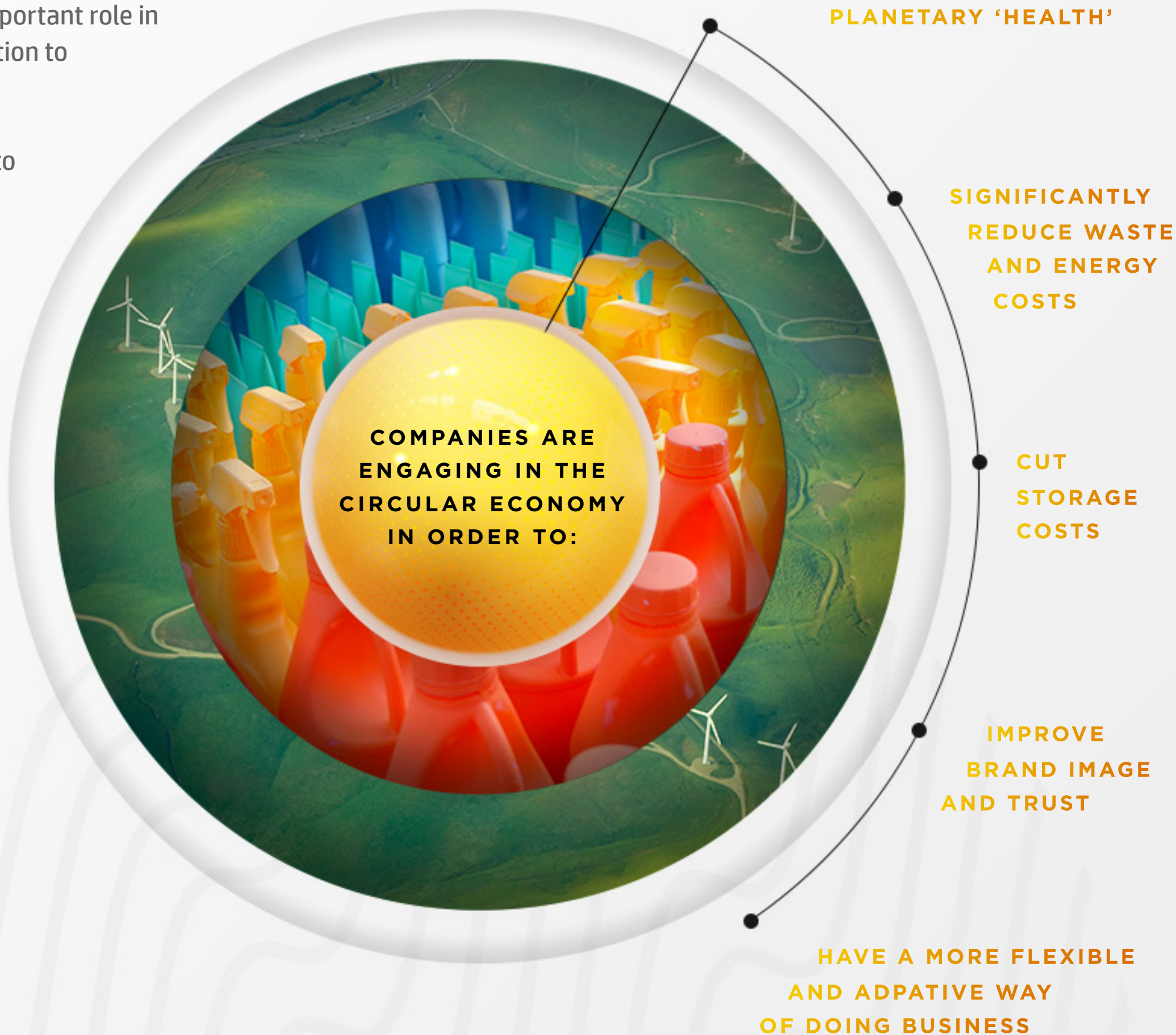
Waste

Waste

WHAT IS YOUR PLAN FOR TRANSITIONING TO A CIRCULAR ECONOMY?

If you manage a brand or a printing company, your operations play an integral role in the transition to a more sustainable, circular economy. From the choice of material you use for packaging to the sources of energy used when printing, your decisions can play an important role in helping the world transition to a circular economy.

HP Indigo is committed to helping you on your journey to more sustainable printing. In this eBook, we aim to demonstrate how brands and printing service providers (PSPs) can enact a circular economy approach.



HP INDIGO:
**HELPING YOU PRINT
MORE SUSTAINABLY**

PROVIDING GLOBAL LEADERSHIP IN DIGITAL PRINTING, HP IS FULLY INVESTED IN THE CIRCULAR ECONOMY CONCEPT, AND WE HAVE ACHIEVED NUMEROUS AWARDS RECOGNIZING OUR SUSTAINABILITY EFFORTS.

Unlike traditional methods, digital printing provides your brand or printing business with the tools to engage with the circular economy model. A digital printer allows you to print on a wide variety of sustainable media, reduce energy usage, and produce less waste.



HP INDIGO:

OUR SUSTAINABILITY COMMITMENTS CAN HELP YOUR CIRCULAR ECONOMY INITIATIVES

Your customers, public opinion and, in many countries, governments increasingly expect that sustainability is considered at every level of your company's processes. At HP Indigo, we believe that high-quality printing, beautiful design and safe, functional packaging will continue to play a crucial role in sales and marketing – but processes will need to change to make that printed material as sustainable as possible.

WE ARE DEDICATED TO HELPING OUR CUSTOMERS ACHIEVE CIRCULARITY AND HAVE MADE SEVERAL SIGNIFICANT COMMITMENTS TO BECOME MORE SUSTAINABLE OURSELVES:

IMPROVING YOUR SUPPLY CHAIN

'Just-in-time' printing reduces the need for big inventory, therefore reduces your carbon footprint throughout the supply chain.

RESPONSIBLE SOURCING

We reused and recycled 600 tons of metal and plastic in 2019.

REDUCING THE CARBON FOOTPRINT OF PRODUCT TRANSPORTATION

We have redesigned our inks to be more concentrated. This allows us to reduce our plastic tube production, and reduce the supply chain and plastic waste at our customers' sites.

LOW CARBON MANUFACTURING

HP Indigo aim to reduce energy and waste at our manufacturing facilities as a way of life. Whatever we are unable to eliminate during press production, we offset.

Furthermore, part of our energy usage is covered at our Israeli production plant, which generates over 1 million KWH each year.



HP INDIGO: JOURNEY TO SUSTAINABILITY

At HP Indigo, we are dedicated to reducing our own waste and energy consumption. However, we believe the true potential of digital printing is how it helps your company enter the circular economy.

2006

R presses production line starts (80% of press parts reused)

2035

Plan to use 100% renewable energy in all HP global operations

2009

Starting free-of-charge BID and Spare part take-back program (saving almost 600 tons of metal and plastic in 2019)

2025

Set a target to use 30% post-consumer recycled content plastic across our print services and print portfolio; also aim to use 60% renewable energy in all HP global operations

2012

Carbon-neutral manufacturing begins

2020

Introduction of LEP^x: an extreme power of LEP technology to achieve maximum productivity with minimal waste

2014

RIO (Regenerated Imaging Oil) system – 20-50% less liquid carrier waste from the press

2018

TUV Austria certification for compostable pouch

2015

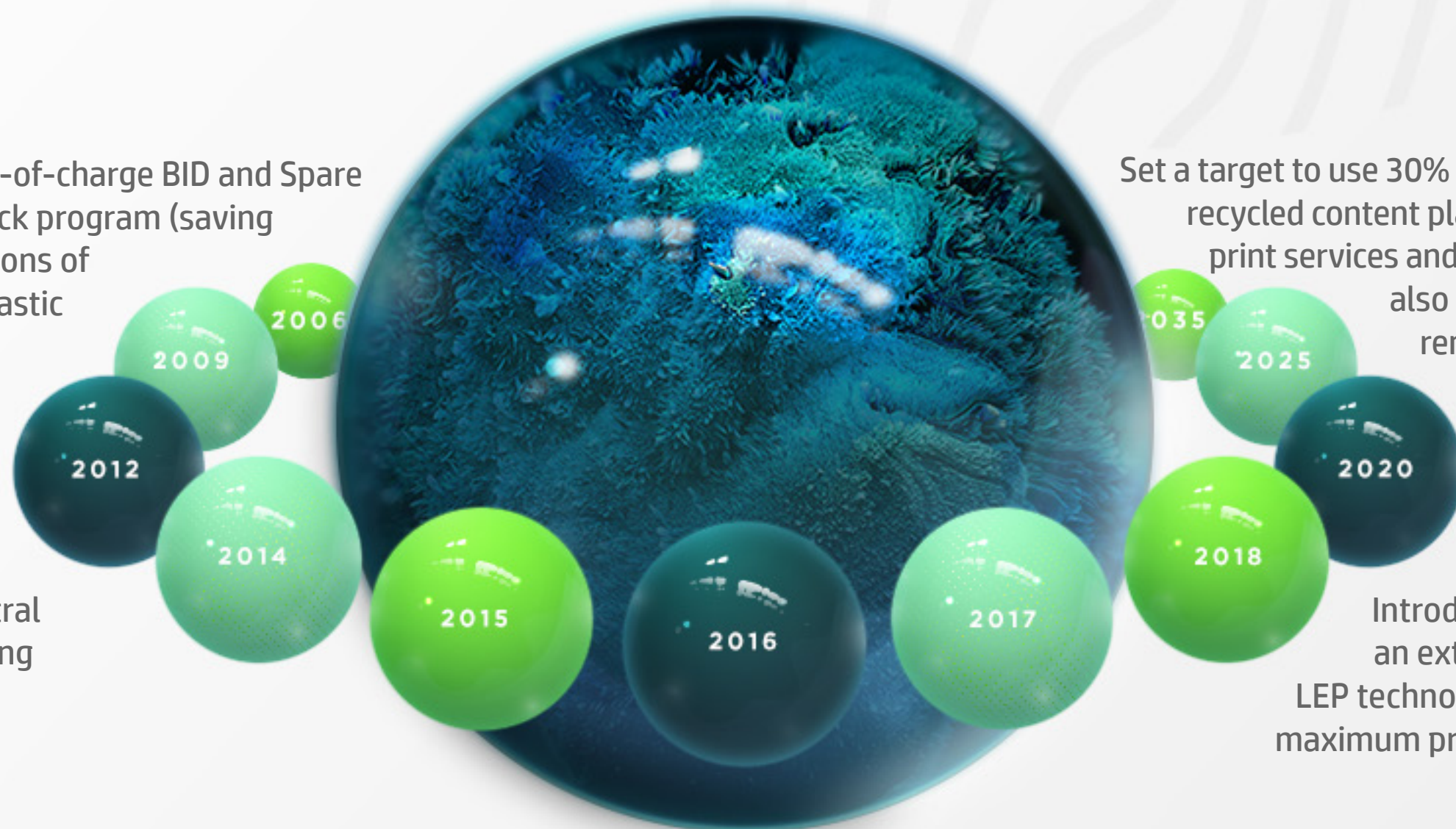
EPM – Enhanced Productivity Mode – saves 25% of electricity usage per printed page

2017

High solids ink: Designed to reduce carbon footprint of ink transportation and liquid carrier waste

2016

Peer-reviewed LCA (Life Cycle Assessment) for Indigo printed pouches



HP INDIGO SUPPORTS YOUR JOURNEY TOWARDS A CIRCULAR ECONOMY

Whether you are a major consumer-facing brand or a specialized printer, HP Indigo can support your strategy for engaging with the circular economy.

HOW HP INDIGO HELPS YOUR BRAND PRINT MORE SUSTAINABLY

Almost all consumer goods require packaging to help keep products safe and for marketing. However, packaging has an outsized environmental impact. In the United States some 80 million tons of packaging was produced in 2017, of which 40% ended up in landfill.⁶ HP Indigo provides sustainable and recyclable solutions for packaging.

COMPATIBILITY WITH PLASTIC RECYCLING

HP Indigo is a member of CEFLEX (Circular Economy for Flexible Packaging). We offer a variety of products that support plastic recycling, such as single polymer flexible pouches, PET bottles, and shrink sleeves.

PAPER AND FLEXIBLE FILM DEINKING

HP Indigo prints can be recycled into many useful fiber-based materials. This means that many kinds of packaging can be repurposed multiple times.

INK SAFETY

Your customers' health and safety is of paramount importance. And this is why HP Indigo's Electroink complies with the EU REACH standard and additional regulation requirements for chemicals, as certified by Intertek's Green Leaf eco label.

COMPOSTABLE POUCHES

Many types of printed paper or flexible films are unsuitable for composting. However, HP Indigo's printing inks have been certified by TUV Austria for use on compostable labels and flexible packaging, meaning they can be left to compost.



HOW HP INDIGO HELPS YOUR PSP TO PRINT MORE SUSTAINABLY

Print service providers play an invaluable role in helping publishers and brands communicate with their customers. Indeed, the global market for printing services is set to reach \$821 billion by 2022.⁷

PSPs face numerous challenges when it comes to sustainability and traditional plate and cylinder methods are wasteful and energy intensive. However, digital printing with HP Indigo can help you move towards the circular model.

PEER-REVIEWED LIFE CYCLE ASSESSMENT (LCA)

Our digital HP Indigo 20000 has been independently audited as part of LCA studies and is shown to be significantly less environmentally damaging than traditional methods.

PRINT ON RESPONSIBLY SOURCED MEDIA

HP Indigo's digital presses allow you to print on responsibly sourced media – our presses are compatible with over 1,500 media carrying environmental credentials.

ENERGY SAVING

Our state-of-the-art presses are energy efficient and cut your energy per printed page compared to traditional methods.

WASTE REDUCTION

A digital press allows your company to eliminate plates and cylinders while producing short 'just-in-time' runs, thereby reducing waste and warehousing costs.



NEXT STEPS ON YOUR JOURNEY TO A CIRCULAR ECONOMY

At the start of this eBook, we imagined a near future where the circular economy was the norm. In this scenario, a regular consumer could compost magazines, recycle everyday plastics, and return coffee pouches to be cleaned and reused.

There is nothing stopping your business from making that scenario a reality today; the technology and materials are already available. However, most brands and print service providers remain locked into the established 'take, make, waste' model of production. Nevertheless, consumers are increasingly demanding that your packaging and printed media be produced in a more sustainable manner. And this is where HP Indigo can help.

As one of the world's leading digital printing company, we provide PSPs and brands with the means to foster the circular economy – to meet the expectations of your consumers and the needs of the planet.

TO LEARN MORE ABOUT HP INDIGO AND
THE CIRCULAR ECONOMY, PLEASE VISIT:
hp.com/go/indigo-sustainability



REFERENCE SOURCES

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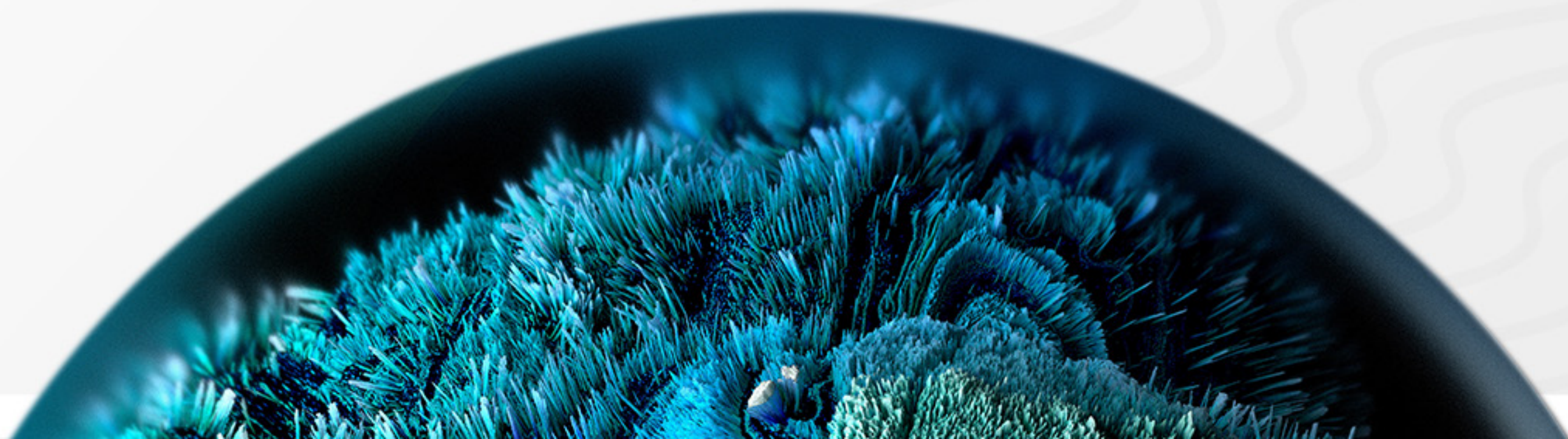
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