

# The Evolution and Future of OEM Remanufacturing

The background features a large, stylized grey shape that resembles a thick letter 'A' or a similar geometric form. To its right, there is a red triangle pointing downwards. Below the red triangle, there is a black parallelogram shape. The overall design is minimalist and modern.

**The Recycler Live - Brussels**

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# Biography and Contact

**Charles Brewer** is the president of Actionable Intelligence, the digital imaging industry's leading market research firm. In 2009, he and his team launched the company along with its website, [www.Action-Intell.com](http://www.Action-Intell.com). Featuring nearly 10,000 posts, [www.Action-Intell.com](http://www.Action-Intell.com) is the industry's destination site for breaking news and analysis and is visited weekly by thousands of decision makers from OEMs and third-party supplies vendors as well as their channel partners. Actionable Intelligence also provides custom research to hardware and consumables manufacturers as well as to various industry stakeholders such as Wall Street analysts and law firms. A U.S. Navy veteran, Mr. Brewer holds a BA and MA from the University of Massachusetts-Boston. He was an editor for Inc. magazine and ComputerWorld as well as the the managing editor of Lyra Research's Hard Copy Supplies Journal.

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# Agenda



# The Evolution and Future of OEM Remanufacturing

An abstract graphic composed of several geometric shapes. A large grey shape, resembling a stylized 'A' or a wide arrow, points upwards and to the right. A smaller red triangle is positioned to the right of the grey shape's upper right corner. A black parallelogram is located below the red triangle, pointing downwards and to the right. The background is split horizontally into a dark grey top half and a white bottom half.

**Yesterday and Today**

# A Short Stroll Down Memory Lane

1980s

Offering discounted pricing, reman industry grows out of industry recharging light-lens copier supplies

Quickly attracts other 3<sup>rd</sup>-party supplies vendors marketing impact ribbons, etc.

OEMs are focused on installed base of analog devices

1990s

Thousands of companies worldwide begin refilling and selling ink and toner cartridges for digital devices

Remans gain support from wide range of raw materials suppliers

OEMs start remanufacturing—but some exit quickly

2000s

Growth peaks in most markets and consolidation begins

Cheap Chinese new-builds begin grabbing share and compressing margins

OEMs develop sophisticated go-to-market strategies (CPG, MPS, etc.) that sometimes include marketing remans

2010s

Falling print volumes drive down demand for all cartridges and fuel rapid reman industry consolidation

Chinese new-builds dominate global 3<sup>rd</sup>-party supplies market

Many struggling remans that can't find buyers fail or shrink dramatically

OEMs cozy up to new-builds

2020s

Beleaguered reman industry left reeling by COVID

Ongoing consolidation pushes global number of remans down from thousands to hundreds

Chinese firms start feeling pressures

# While Most Dabbled In Remanufacturing, Three Companies Broke New Ground

Lexmark	Toshiba	Xerox
<p>Lexmark developed a sophisticated reman cartridge program in the 1990s. It collected and remanned its own cartridges to keep printing costs down for B-to-B customers. For B-to-C, it marketed the Linea line of HP remans, some of which we recently found on Amazon.</p>	<p>As machines based on digital technologies began to dominate offices, copier companies looked to dealers to tap the growing printer population. Around 2005, Toshiba launched Encompass, which offered tools to assess printing efficiencies and featured remans to lower costs.</p>	<p>Xerox also developed various business lines to derive revenue from non-Xerox devices. It launched what became the “It’s Compatible” line of HP remans in the late 90s, which it outsourced to 3rd-party supplies vendors. It also sold tons of its advanced chemical toners to the reman industry.</p>



# Brother Began Remanufacturing Toner Cartridges in 2004

Last year, the company was awarded Blue Angel certification on its TN-3512 RE toner cartridge, which it claims is “one of the most environmentally-friendly remanufactured toner cartridges in Europe.”

## Toner Cartridge Remanufacturing

Brother collects empties at its four remanufacturing facilities, which are located in Wales, Slovakia, U.S.A, and Asia. In 2022, Brother said it remanufactured about 3 M toner cartridges annually, and it had remanned 40 M since 2004.

## The Initiative Is Limited

While Brother claims its toner reman initiative is global, production is limited mostly to its plant in Slovakia. Since it opened in 2007, the firm says it produced a total of 18 M reman toner cartridges at the Slovakia plant, which contributed 2.6 M cartridges annually.





## Ricoh Says It Began Recycling Supplies in the 1990s

Its current cartridge refilling programs appear to be centered on machines in Europe and Japan. Through its GreenLine operation based in France, the firm refurbishes a range of products including both hardware and consumables.

### Toner Cartridge Remanufacturing

Ricoh refills toner bottles for its IM C8000/C6500 and Pro C5310S/C5300S MFPs without disassembly. It says it has reduced new material consumption by 36 tons a year and cut CO2 emissions by 210 tons. The firm also supports refilling programs for production printer consumables.

### Chemical Toner Production

Ricoh manufactures so-called PXP toners, which involves a solvent-based production process. The firm says it has improved its “material design of toner and production technology.” It can now reuse the solvent used in toner production, which lowers costs and cuts solvent inputs by 90%.



## HP's Cartridge Reman Initiatives Have Been Europe-Focused, Too

HP has several unique programs aimed at remanufacturing its ink and toner cartridges. First, it announced ink and toner cartridge reman programs, and now SecuReuse. The firm is taking the "long view" on remanufacturing.

### EvoCycle Growing

HP launched EvoCycle in 2021. Made from 75% reused or recycled materials, these toner cartridges are refurbished at Canon's factory in France. The EvoCycle line contained just a couple of SKUs and was sold exclusively to the French government and later to enterprise customers. HP charges a premium for EvoCycle SKUs, and it is expanding the number of cartridges. Last year, the line was released in Germany and UK, then Canada and US.

### Not Much On "Renewed" Inks

Prior to EvoCycle came word of the HP Instant Ink with Planet Partners pilot in Germany. HP partnered with a third-party to "refresh" tanks used in certain Officejet Pro machines. We've been hearing mixed reports on the program, and there's been no announcement of the program expanding. However, last year HP introduced its new EvoMore-branded ink tanks with higher yields and more sustainable packaging. These are not "refreshed" but this new brand might be used for refilled ink tanks in the future.

### Enter SecuReuse

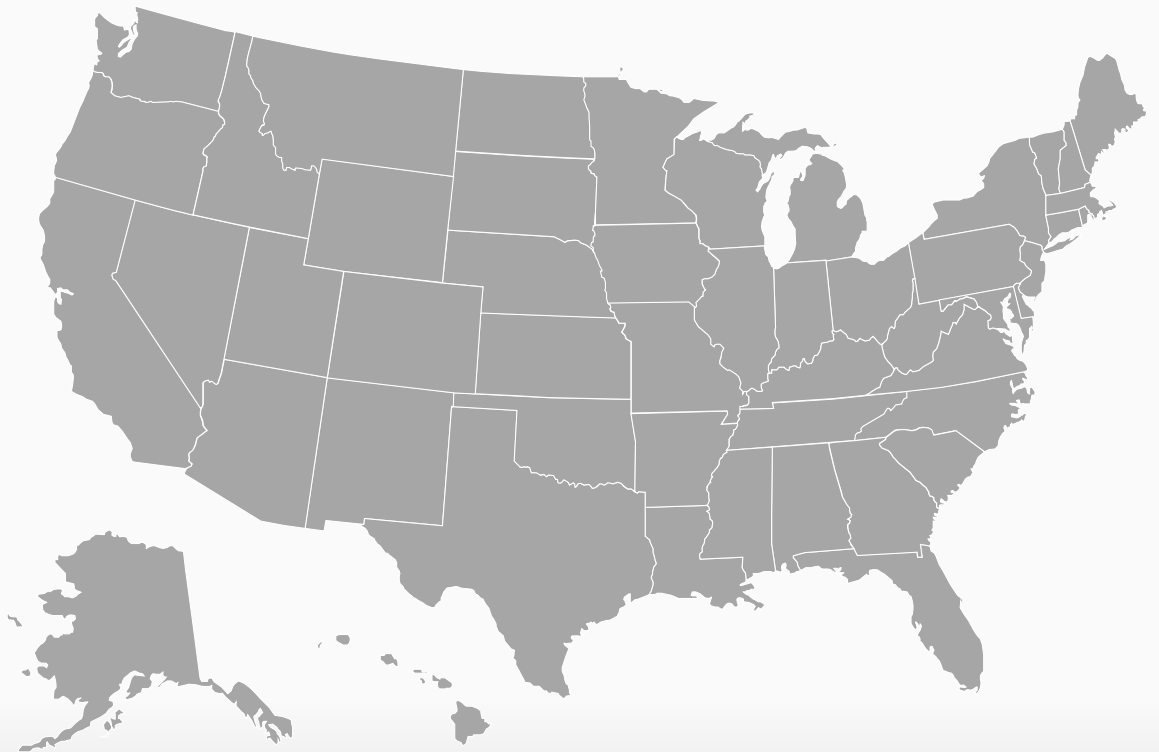
Working with two leading European remanufacturers, KMP and 3T Supplies/Peach, HP is piloting a program that will allow remanufacturers to reset chips on its toner cartridges. The program is planned to be run through 2024 and 2025. Expected to be more widely available in 2026, HP claims SecuReuse also allows remans to produce fully-functional cartridges.

# Why No Love for the Good Old USA, OEMs?

Historically, Europe has demonstrated more interest in remanufacturing

With less than 100 remans, the US industry is in shambles and the market has dwindled

But, some OEMs are saying they plan to enlarge programs into the US




# On Either Side of the Atlantic, The Remanufacturing Industry Faces Similar Challenges

The number of US remanufacturers has dropped from thousands to under one hundred. The situation in Europe is a little better...but not much.

US	Europe	US & Europe
<ul style="list-style-type: none"><li>• US market is homogenous, so it is fundamentally different from Europe</li><li>• One giant US company emerged that has proved impossible to compete with</li><li>• Various remans have invested to take on the market leader and failed</li><li>• The industry has been hollowed out—no mid-tier</li></ul>	<ul style="list-style-type: none"><li>• The total EU industry generates roughly the same revenue as the one in the US, but has dozens more companies</li><li>• Because the market is more fragmented, no single EU company dominates</li><li>• More mid-tier companies can stay in business by operating in one country</li></ul>	<ul style="list-style-type: none"><li>• Both regions are seeing falling print volumes as more end users digitize</li><li>• Cheap Chinese products stymie growth for remans in both regions</li><li>• There's no indication that market conditions will change in either region</li></ul>

# The Evolution and Future of OEM Remanufacturing

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**Today and Tomorrow**

# Why Do OEMs Want to Compete in the Reman Market



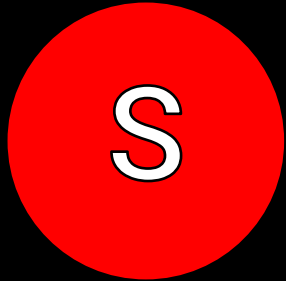
Consumer demand and new regulations in mature markets are driving OEMs to reconsider remanufactured products.

The wider release of branded OEM reman cartridges should help to both grow and stabilize Western consumables markets.

With proper marketing and positioning, future reman cartridges from OEMs will be priced higher than traditional third-party remans.

Of course, the OEMs entering the reman market will not transform the 3<sup>rd</sup>-party supplies market overnight. Firms selling primarily on price will survive.

# Impact of OEMs in Reman Markets



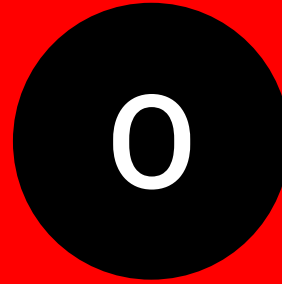
## Strengths

- With strong marketing campaigns, OEMs will help spark new demand for reman cartridges
- OEM remans can command a premium
- The reman industry will gain share



## Weaknesses

- Falling print volumes and certain other market conditions will not be affected
- Value propositions based primarily on price point will continue to pressure margins



## Opportunities

- New alliances will be formed
  - OEMs and remans
  - Remans and remans
- New channel partners will emerge
- The opportunities will be felt across the value chain



## Threats

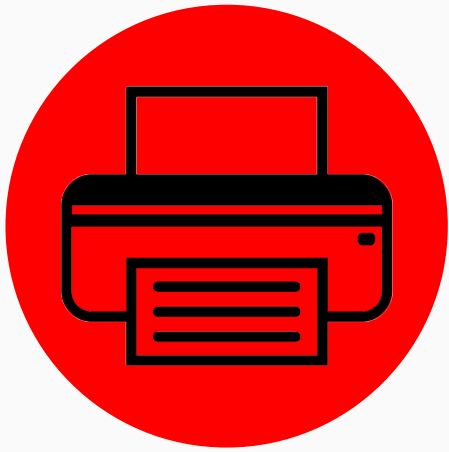
- New competitors with new channel partners will enter the market
- Cores may become scarcer and more expensive
- Margins on remans could face even more pressure

# What's in it for the Reman Industry?

New customers	New suppliers	Other changes
<ul style="list-style-type: none"><li>• Because of CAPEX concerns, OEMS will look to outsource at least some of their reman operations</li><li>• In addition to gaining new OEM clients, closed distribution networks will open to reman partners</li><li>• With OEM product, the reman industry will gain market share</li></ul>	<ul style="list-style-type: none"><li>• Depending on the OEM, we expect that there will be some realignment in supply chains</li><li>• At the very least, OEM partnerships will open up new sources for cores</li><li>• As noted earlier, OEMs like Xerox have a legacy of supplying remans that they may leverage</li><li>• New BOMs may require other changes in materials</li></ul>	<ul style="list-style-type: none"><li>• Contract manufacturing with OEMs is likely to open remans up to new scrutiny</li><li>• Production practices, safety concerns, industrial hygiene, and other issues may arise</li><li>• Remans are likely to face new costs including licensing fees</li><li>• And there will be other unforeseen changes</li></ul>



# Would OEMs Partner With Reman Industry?



OEMs, especially copier firms, have a long history working with remanufacturers. These new relationships we're discussing, however, would be unique. In the past, OEMs hired remans to make cartridges for the competition's machines. Now, remans will be hired to make consumables for the OEM's machines.

## Up and Running in No Time

OEMs can tap into an existing infrastructure with lots of expertise. No big CAPEX outlay. No staffing. Partnering with a reman offers a turn-key solution. OEMs can enter the market quickly.

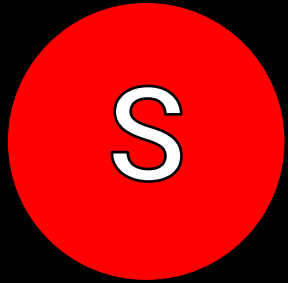
## Lots of Expertise

Large remans know what they're doing and have been doing it for years. Depending on the OEM, the remanufacturer may already be producing some of the SKUs that an OEM would request.

## And industry knowledge

.In addition to understanding how to remanufacture cartridges, remans bring a wealth of knowledge about running effective reverse-logistic programs, understanding order fulfillment, channel relationships, etc.

# What's it Mean for Reman Industry?



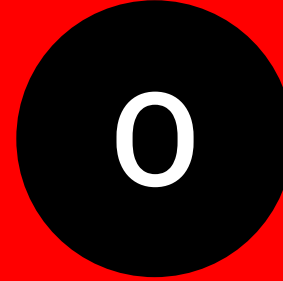
## Strengths

- Offer OEMs an established industry that can quickly bring to market high-quality product
- Help clients develop effective new go-to-market strategies for new product category



## Weaknesses

- Conform to large competitors' business demands
- Rapidly scale to meet OEM production levels
- Take on new unknown risks that could prove to be damaging



## Opportunities

- Enter a new market that should be growing quickly in the not-too-distant future
- Participate in the launch of a new product category that could be transformative



## Threats

- Build collaborative relationships in which remans will always be the junior partners
- Create products for a market that never develops
- Partner with firms that remans must also compete with

# What's it Mean for OEMs?



S

## Strengths

- Grow supplies revenue from the sale of a new product category featuring premium OEM remans
- Address growing complaints about the lack of sustainable consumables



W

## Weaknesses

- Enter a beleaguered industry that's been shrinking for more than a decade
- Build a floor under an aftermarket segment that has faced relentless downward pressures



O

## Opportunities

- Derive new revenue streams from a market that's been historically closed to OEMs
- Become a leader in the circular economy
- Develop new services that support sustainability



T

## Threats

- Fail to develop an effective go-to-market strategy
- Undermine the value proposition of new OEM cartridges
- Cannibalize consumables sales of high-margin with low margin remans

# If Premium OEM Remans Are Successful, It will Change Everything



If OEMs develop product lines based on marketing remans for their own machines, it will transform the remanufacturing industry. While some participants will benefit, others will be left out. Regardless, every link in the reman value chain will be impacted.

## Core Collections

OEMs run their own collection programs and get back millions of empties. Reman partners will get access to this abundant source of empties, which will impact empties brokers and other collectors.

## Other Raw Materials

Some OEMs currently marketing premium remans say they only employ their own toners and inks. If true, going forward suppliers to the reman industry will lose customers when they go to work with OEMs.

## Chips

Similarly, chip vendors will lose out to OEMs that supply or license chips to their reman partners. HP's SecuReuse gives a glimpse of what is to come, and for some the program is scary!

# The Evolution and Future of OEM Remanufacturing

**Wrap Up**

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# Today, Most OEMs Run Global Remanufacturing Programs

But Generally, These Programs Focus on Hardware

## Core Collections

OEMs offer end users ways to return spent cartridges rather than simply put them into the trash

## Empties Get Recycled

Returned cartridges are broken down and the materials are recycled into new products as well as “thermally” recycled



## We Sense a Change

Certain OEMs are developing remanufacturing capabilities to refurb and sell remanned ink and toner cartridges

## Not a Big Change...Yet

The programs that we're hearing about are tiny—and mostly in Europe so far. They've had no impact on the global market, but in time they will

# Key Takeaways

- OEMs have been marketing remans for years
- In some cases, they've worked with independent remanufacturers
- Brother, HP, and Ricoh are currently marketing remans for their own machines, but these programs are small and have had no impact on consumables markets
- These OEM programs, however, may be a harbinger of things to come
- The market is demanding more sustainable products and that includes remanufactured ink and toner cartridges
- There is an opportunity for OEMs and remans to work together, which would be beneficial to both
- Remans would gain new access to large new customers
- OEMs will create a new product category and enter a new market segment
- While it may be good for some, not everyone will benefit

Contact [sales@action-intell.com](mailto:sales@action-intell.com) for  
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Questions?

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