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TURNING GREEN INTO GOLD

—GM Technology's Zoltan Matyas reveals the business opportunities that achieved double digit growth

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IMAGING WORLD

No. 118 | 2021

RT staff invited Chinese cartridge remanufacturers to join them in celebrating Global Reman Day on April 8, 2021. As an industry media and show organizer, RT has celebrated Reman Day since 2019. Photographed above with a giant cake, RT staff celebrated Reman Day in quarantine in 2020 with each staff reporting on their own research of companies involved in remanufacturing in different fields around the world.

EDITORIAL

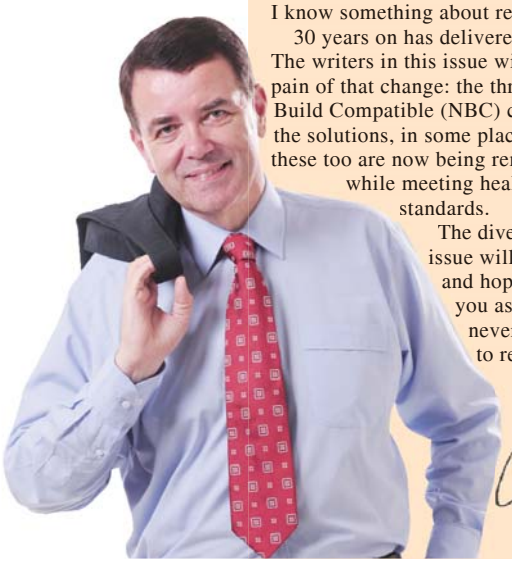
I was birthed into remanufacturing in 1990 with my own cartridge remanufacturing business in Sydney, Australia. I used a business model where I collected my customers' used printer cartridges and took them back to my humble converted garage to be remanufactured. The next day I returned those refilled and repaired cartridges, and continued to remanufacture each of them, up to fifteen times or more.

It was all about providing a "green alternative" and local jobs. No OEM has ever made cartridges in Australia, so remanufacturing created local employment for thousands of remanufacturers. It was also about saving money too. My clients saved 30 percent on the cost of purchasing a new printer cartridge.

It was a perfect business model: "the right to repair" in its purest form. I didn't have to source empties because I simply used my customer's cartridges. I earned enough to profitably sell my start-up business ten years later and buy a house. Then I was enticed back into the industry to run a remanufacturing trade association and eventually ended up running an industry media group in Zhuhai, China. So, I know something about remanufacturing.

30 years on has delivered huge change. The writers in this issue will share the pain of that change: the threat of New-Build Compatible (NBC) cartridges and the solutions, in some places, where these too are now being remanufactured while meeting health and quality standards.

The diverse views in this issue will challenge you and hopefully excite you as well. There is never an excuse not to remanufacture.



David Gibbons
Publisher

» Russia

Russian Authorities Debunk Cartridge Myths

Evidence was revealed to an online gathering of big buyers in Russia that NBCs are no longer single-use products. 20 million NBCs were remanufactured last year, representing 48.9% of all cartridges remanufactured in Russia in 2020. The real industry enemies are those suppliers of low-quality, toxic cartridges—both remanufactured and NBC.

Read more

» China

G&G Adds Reman Ricoh Toners to Its Reborn Catalogue

On Global Recycling Day, G&G added remanufactured toner cartridges to its Reborn products list that can be used in Ricoh copiers. Reborn is a green solution for use in copiers featuring 100% reman toner powders, reman empties and reman chips.

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» China

Mito Celebrates Anniversary with Tree Planting

To celebrate its 18th anniversary of remanufacturing of color cartridges Mito held a tree planting activity on Arbor Day with the theme of "Build a Green Mito and Create a New Era." Arbor Day which was celebrated on March 12, 2021, coincided with the the company's anniversary.

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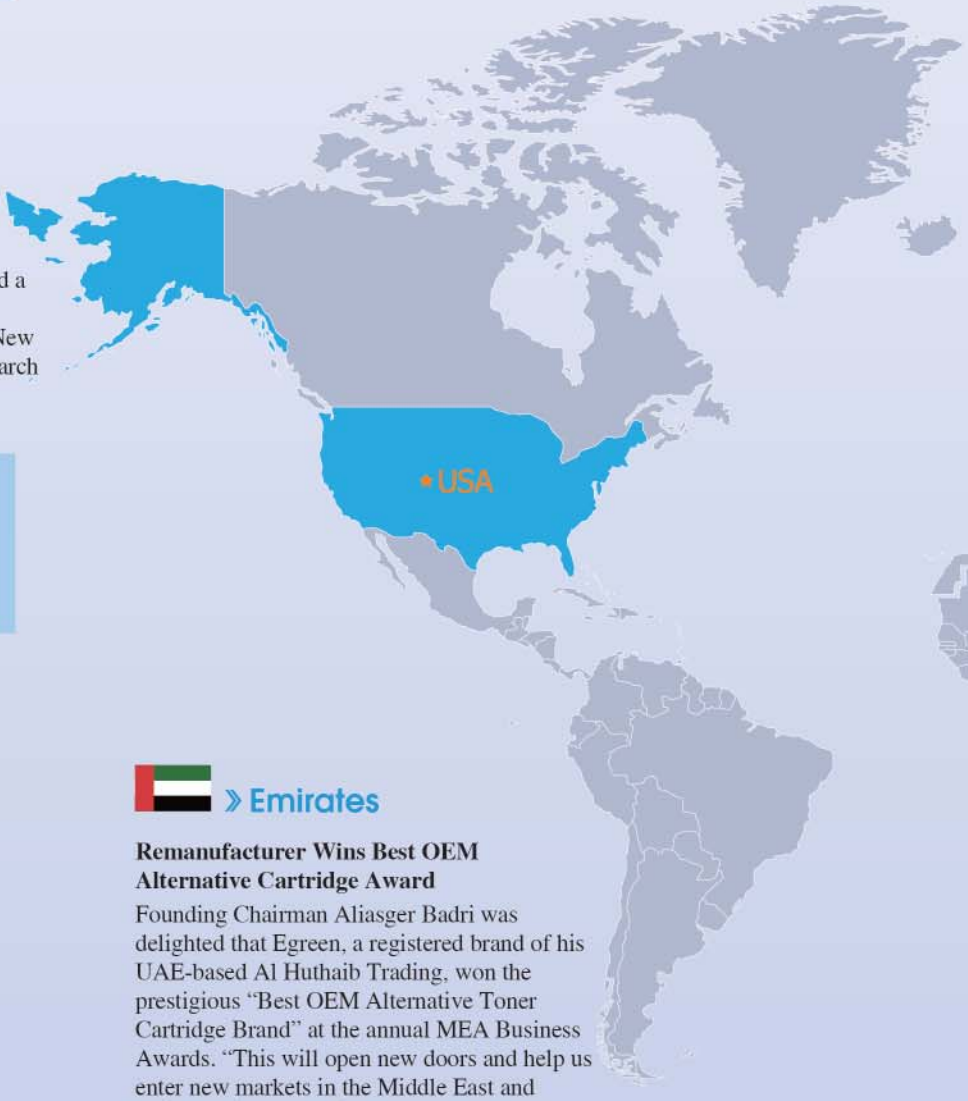

» China

HYB Releases Remanufactured Fuser Units for HP and Xerox

According to China-based HYB, the remanufactured fuser units produced in Zhuhai are professionally engineered and configured to perform the high-quality printouts in HP and Xerox devices. "We produced the products to deliver outstanding quality and dependable results as you would expect from genuine OEM products," said sales director Kim Lee.

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» Emirates

Remanufacturer Wins Best OEM Alternative Cartridge Award

Founding Chairman Aliasger Badri was delighted that Egreen, a registered brand of his UAE-based Al Huthaib Trading, won the prestigious "Best OEM Alternative Toner Cartridge Brand" at the annual MEA Business Awards. "This will open new doors and help us enter new markets in the Middle East and Africa region," he said.

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» USA

Graphic Novel Reveals Benefits of Remanufacturing

A novel for school students released by the Remanufacturing Industries Council, raises the profile of the circular economy and a more sustainable world. Many are making career choices as early as middle school. "The earlier we introduce them to the remanufacturing industry, the better chance they may consider it as a career path," said a spokesperson.

Read more

» UK

Kodak Remanufactured Consumables Expands

UK-based DCI Ltd has formed a strategic agreement with TST Impreso in Texas to distribute Kodak branded remanufactured ink and toner cartridges in the US market. DCI has held the Kodak license since 2016 to remanufacture ink and toner cartridges for use in HP, Canon, Brother, Epson and Samsung printers.

Read more

» Spain

Royal Decree Stops New Build Cartridges Entering Spain

ETIRA is celebrating a change to Spanish rules after it and the European Recycling Platform lobbied the government to have the King close a loophole that allowed imports of certain new-build cartridges. Unregistered importers were not disclosing their WEEE registration details and were avoiding the costs of WEEE compliance.

Read more

» Italy

Distributors Voice Mixed Reactions Over Italian Reman Laws

All government departments, agencies and corporates authorised to purchase cartridges must make sure their orders comply with new remanufacturing laws in Italy. Tenders for ink and toner must include a minimum of 30% being remanufactured supplies.

Read more

» UK

Disrupting Imaging Supplies in Europe

The iconic Pelikan brand launched a line of Print-Rite new-built, bio-based cartridges that can also be remanufactured. They are not designed as Single Use Cartridges (SUC), and are colored green for easy recognition. They can be remanufactured like a used OEM cartridge using standard components. "They tick all the green environment boxes and meet European standards," said CEO Steve Weedon.

Read more

Manufacturing and N are Important

Coenie Greyling

It is often said that Africa is not for the faint-hearted and not for sissies. This is true for so many reasons but despite its intrinsic and inherent problems, it is a continent brimming with so many opportunities for growth and expansion.

The immense historical success of the remanufacturing industry, obviously opposed by the OEMs (Original Equipment Manufacturers), opened an obvious market opportunity for the New-Build Cartridge (NBC) manufacturers. In fact, the incredible success story of the remanufacturing industry, worldwide, in taking market share from the OEM's, has ultimately led to its very unfortunate demise.

In the pioneering days, it was humbling to see the exceptional ingenuity and resourcefulness of companies, with little or no technical support from compatible imaging suppliers and manufacturers. There were none. For those that can remember the frustration of desperately seeking some sort of toner that would work in the first 92285A (CX) cartridge and then the delight of making available a choice of consumables for the 95A (SX). That competence and resourcefulness continue to exist in the market place.

The incredible success and growth of the NBC manufacturers have enabled them to take more and more of both the OEM and remanufactured consumables market. It ultimately led to one aftermarket company purchasing an OEM, a true testament to the ultimate success of compatible products.

However, the success of the NBCs has come at the cost of losing so many incredibly resourceful companies and people from the remanufacturing industry. It has decimated localised production with the loss of thousands of jobs.

NBC pricing has simply made it unprofitable for specialised manufacturers of components to

lew-Build Cartridges

Based in Johannesburg, South Africa, Coenie Greyling is an official STM C trainer throughout Africa. He has a proven record of success in product ion and remanufacturing environments related to safety, materials manage ment, job planning, quality control and employee and customer training.

survive and the vast majority of companies who were remanufacturing have either now closed shop or are now offering NBC products instead. They simply could not be competitive enough. It also became more and more difficult to source the required components for remanufacturing.

Africa has been brought back into the spotlight and is being seen by many as the last frontier for business growth opportunities. Even more relevant is the understanding that local manufacturing will be key to success on the continent.

The African Continental Free Trade Agreement (AfCFTA) came into effect on January 1, 2021, and the world's largest single market was formed.

Trade internally, between African markets, has been lower than in any other region in the world with less than 18 percent of exports traded within the continent. Intra-European trade is as high as 70%. The African Union, through the AfCFTA Agreement, aims to generate economic growth, create jobs and make Africa a meaningful player in international trade. It is estimated that intra-African trade will increase by 52 percent by 2022, primarily driven by locally produced products.

The Africa continent has seen more than its fair share of substandard, cheap NBCs flooding into the various markets from unknown and untested sources with the only intent of making quick money and no intention of creating a long term, sustainable business.

But the African market is turning its back on cheap, low-quality products and is maturing into a market looking for and even demanding the highest quality product that delivers on expectations. And the demand is for locally manufactured products.

Here lies the opportunity.

With the new agreement in place and the drive for locally produced products, we will see trade barriers implemented to promote the intra-Africa trade at the expense of imported products. The road to economic recovery, post-Covid-19 will accentuate this trend.

The aftermarket was built on the ability to take a used OEM supply, opening the casing, renewing and replacing the components into a reassembled and tested unit of a recognised brand with quality built into the unit through dedication and experience.

Africa has been brought back into the spotlight and is being seen by many as the last frontier for business growth opportunities.

In part, the demise of the remanufacturing sector was a drawback and the unsuitability of remanufacturing the NBC cartridge and finding a tested solution for servicing the unit.

For a moment, imagine an NBC solution in the form of a cartridge service kit removing the intrinsic difficulties of remanufacturing, nay, servicing of the unit.

Often the quality of the plastic used in the casing, stability of attached blades and foams and the difference in the component dimensions precluded NBC cartridges from being remanufactured.

For Africa, the vision would be a recyclable NBC cartridge. A cartridge of sufficient build quality where secondary components and the casing will last an additional cycle or two. Fear should not be a factor for the brave embarking on this new potential and the quality of the NBCs is improving hand over fist. We certainly see cartridges today that could easily be re-serviced if a full kit was made available and the correct training provided. Closing the economical loop is possible.

The vision of having preassembled components including OPC drum, PCR, chip, developer or magnetic roller with wiper and doctor blades readily packed as a single-for-use pre-packed cartridge service kit evokes questions of merit. Allowing this vision would not only allow local in-country remanufacturing but also generate a new revenue stream for the NBC cartridge manufacturers by creating income not only from their cartridge ranges but also the supply of their matched components in a service kit form. In this arena, the quality and stability of components and parts would lead the way. All matched components delivered in a kit form for use in a market-leading NBC manufacturers cartridge should be very feasible in a very short timeframe.

In Africa, the opportunities for such an offering are considerable. I see a new cartridge economy with smaller market participants all competing equally in their territories, with smaller and more quality competitive product not only targeting the OEM but also unsupported NBC cartridges. Building a brand name connected with a quality product is paramount for longevity. ■

Selling the Benefi
—How It Ha

It is hard to tell when the remanufacturing of printer cartridges really got started. If you had to give it a date, it would probably be February 25, 1988, when Fred Keen filed the U.S. patent for the "Refillable Toner Cartridge"[1] which expired in 2008.

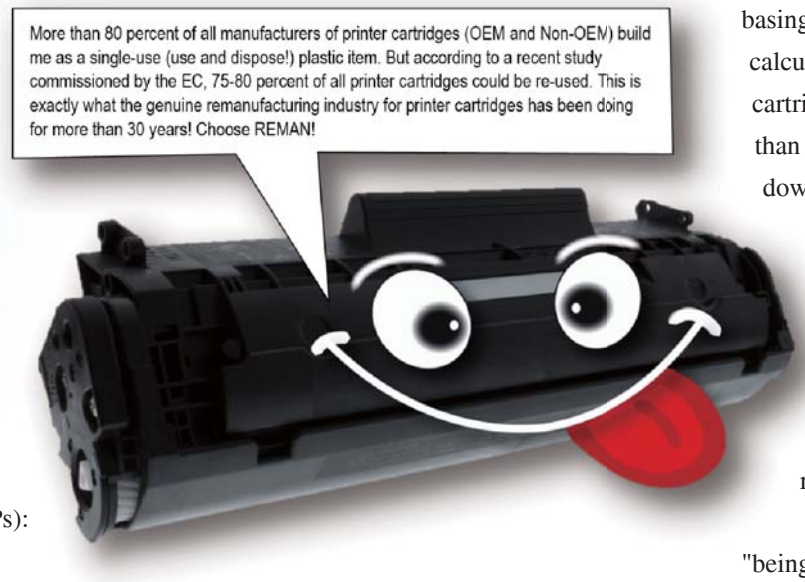
The starting point of the imaging supplies remanufacturing industry for toner has been, and still is, a xero graphic printing system in which many of the parts of the printer (e.g. a photosensitive drum, a cleaning system, a charging system and a feeding system, etc.,) as well as the toner, are contained in a disposable plastic cartridge.

These were always meant to be single-use cartridges back then. However, they are much too complex and far too valuable to be disposed of. Of course, the same holds true for ink cartridges as well. Permissible repair, which is the de facto preparation for re-use, has been, and still is, the better option. Considering the use of materials, remanufacturing remains the most preferable alternative because the

Volker Kappius, who studied Business Administration at the University of Hamburg also holds a postgraduate degree in Business Ethics. Kappius joined German-based Delacamp in 2005 and is now the managing director and CEO. Contact Kappius at <vkappius@delacamp.com>

ts of Reman to Consumers s Changed Over 30 Years

Volker Kappius



geometrical form of the product is retained, and its associated economic value is preserved. In addition, it helps to preserve scarce natural resources and serves as a foundation for a great business model.

This business model is based on two unique selling propositions (USPs):

1. offering a greener alternative and
2. offering a lower priced alternative

to the high-priced, single-use OEM cartridges.

It comes as no surprise that our industry grew quickly with these two USPs fuelling its success. Unfortunately, this quick growth came at a cost: increased competition. Attracting new customers became more challenging because most retailers and other potential channel partners had established relationships with other remanufacturers over the years. It was this competition for new customers which led to focus on the lower price USP not only to compete against the OEMs but also to compete against other remanufacturers.

But the quick growth had an even more detrimental effect: it attracted a flood of new “me-too” market entrants, particularly from China. Thanks to an increasing number of import restrictions on waste plastics, the demand along with high transportation costs created higher prices for empty cores. The new market entrants disrupted the market by quickly switching from remanufactured to completely newly reconstructed, or new-build cartridges. They took advantage of low labour costs in the developing region, low raw material prices as well as official and hidden subsidies. These new-build cartridges could be offered at prices considerably lower than the prices of genuinely remanufactured cartridges. On top of lower costs, the low market prices were boosted by basing the underlying market price calculation for these new-build cartridges on a cost up rather than an OEM cartridge price down approach. Additionally, a lot of these cheap new-build cartridges occupied the growing online sales channels which had been carelessly neglected by most remanufactures.

Instead of focusing on the "being greener" USP, too many remanufacturers started to fight the new competition on price. This proved to be a deadly route for many of them. Why? Because if you compete on price only, your business model is doomed as there will always be somebody who can offer at an even lower price.

It was during this time of the price wars that the growing number of non-OEM suppliers, both reman and new-builds attracted the attention of the printer OEMs. Coupled with a decline in printing in key markets, the biggest OEM started to fight back, probably with the urging of its strategic partner. As a result, the “twisted-prism” (U.S. Patent 5,903,803) lawsuit was filed by Canon against a number of aftermarket companies on January 23, 2012.

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A further spate of lawsuits over patent-infringing products targeted new-build manufacturers and their distributors. These more recent lawsuits have been used by many remanufacturers to start promoting their cartridges as being more IP safe than new-builds. Reman cartridges use permissible repair consumer rights rather than rely on impermissible construction or reconstruction.

In recent years, new-build cartridge players have learned that compliance is not only limited to IP. Many cartridges have been found to be non-compliant to important European Union (EU) environmental and hazardous regulations including ROHS, WEEE, REACH and de facto quality standards for toner emissions like "LGA tested for contaminants". All of which remans must adhere to, as they are.

Selling the benefit of IP and regulatory compliance has had some success until the main players in China reacted and started to try to make their products more IP safe and compliant. As a result, the reman companies had to look for a new USP against these improved new-builds. Fortunately, many of them refocussed their fundamental USP against OEMs which also holds true against new-builds: offering a greener alternative. This is now finally flanked by a new environmental consciousness which leads to the promotion of repair, re-use and recycling in many countries.

This is now finally flanked by a new environmental consciousness which leads to the promotion of repair, re-use and recycling in many countries.

Another important benefit of the reman cartridge is its great fit for use in managed print environments. Here cartridges are not sold on a transactional but on a contractual basis. In a contractual model the benefits of quality, re-use and cost savings of reman cartridges can develop their full potential. This is one of the reasons why OEMs, who are putting their focus on contractual business models as well, want to stop the rise of reman MPS cartridges by means of firmware (FW) updates and highly encrypted chips. But the main reason for blocking FW updates and highly encrypted OEM circuitry are the Chinese copy-cat chips and new-build cartridges.

In 2020, as bad as it was because of the pandemic, a great and long overdue development took place as remanufacturers and OEMs started to team up to cooperate on achieving inevitable re-use targets. Hopefully, this will spread from the EU to many other countries to jointly fight the influx of single-use plastic, new-build cartridges in mature markets.

Over the last 30 years, selling the benefit of reman has gone full circle: from offering a green alternative to price-only and back to being the greener choice. ■

[1] https://bit.ly/3fsvIED

Re

Judge has served as the executive director of the International Imaging Technology Council, a not-for-profit trade association serving imaging supplies remanufacturers and dealers for 20 years. Judge was the executive editor of Recharger magazine. A lawyer for 30 years, Judge also has litigation experience. Judge's work has been published in Recharger, and several other industry magazines, and has won critical acclaim for her writing and industry advocacy. She has assisted in the preparation of six friend of-the-court briefs. Judge has presented the position of the industry to the U.S. International Trade Commission. She can be contacted by email at <tricia@i-itc.org>

manufacturing: From Dirty to Debutante

Tricia Judge

Remanufacturing versus manufacturing. The latter conjures images of clean, humming, brightly lit, perfectly spaced production lines turning out shiny new products. The former, however, has been perceived as the garage-based "aftermarket" that produces dirty, worn products that may cost less, but also perform less.

No more.

In recent years, government and private industry have taken notice of the evolution underway in remanufacturing. Science is being employed to make remanufactured products perform not only as well as new, but sometimes even better than new.

Remanufacturing is at the focal point of the convergence of global environmental awareness, academic quests for improved engineering and consumer demands for choices. And governmental entities are responding to the pressures to foster these activities and are looking, actually supporting, remanufacturing in all industries.

Europe has always been a leader in taking action on its constituents' demands in these areas. The European Union is embracing the circular economy. If it's green in Europe, it's good. And remanufacturing fits the bill.

The remanufacturing industry supports jobs and the environment as well as providing a healthy financial model for businesses. A common refrain in the industry is remanufacturing is good for people, profits, and the planet. For years, the mantra of the International Imaging Technology Council (Int'l ITC) has been remanufacturing is good for the environment, the economy and consumer choice. In more concrete terms, remanufacturing saves an average of 85 percent of energy use, 86 percent of water use, and 85 percent of material use compared to new goods. Remanufacturing is more labor-intensive than original manufacturing because several key processes generally must be done by hand.

To encourage the world to celebrate and promote remanufacturing as environmentally friendly and economically smart, an annual Reman Day was launched in 2018 by the Remanufacturing Industries Council in collaboration with several partner associations: to celebrate remanufacturing and raise awareness about its benefits. The Remanufacturing Association Alliance (RAA) partner associations cover industries as broad as aerospace, medical devices, automotive parts, ink and toner cartridges, and electrical apparatus. The leadership from these seven associations, including the Int'l ITC, meet every month to share ways to improve and promote globally our members' hard work and great products.

On Reman Day, businesses host local events ranging from donuts in the breakroom to factory tours for students or elected officials. To date, more than 300 locations have participated in 20 countries across six continents. Even the international quarantine hasn't slowed down the efforts, Reman Day is recognized more and more every year by government entities.

A common refrain in the industry is remanufacturing is good for people, profits, and the planet.

As a founding member of the Council that brought this day to life, Int'l ITC enthusiastically aided its members that took part. Those that did, saw consumers and business customers respond to the event. It was the first time ever that the remanufacturing industries, from airplanes to inkjet cartridges, came together to promote their members and products.

John Deere, the heavy equipment behemoth, led the way with events hosted around the globe. The automotive sector had events from coast to coast, and in faraway lands like Romania. The cartridge clan has boasted events from Brooklyn to Cairo, Buenos Aires to Zhuhai.

It isn't just a day to wave a flag. Beneath the fanfare is that real coalition of associations, including the Int'l ITC, that is pushing both public and private sector to buy more remanufactured products, and putting real qualitative science behind those efforts.

Under the guidance of Dr Nabil Nasr and the Rochester Institute of Technology, the Remade Institute was born. For more than 25 years, Dr Nasr has worked in the fields of sustainable manufacturing, remanufacturing, circular economy, clean production, and sustainable product development and is considered an international leader in research and development efforts in these disciplines. He has developed strong ties to the industry through efforts to implement and improve the sustainable design and remanufacturing processes at hundreds of companies from diverse sectors.

Dr Nasr is associate provost at the Rochester Institute of Technology and director of the Golisano Institute for Sustainability. In 1997 he founded the Center

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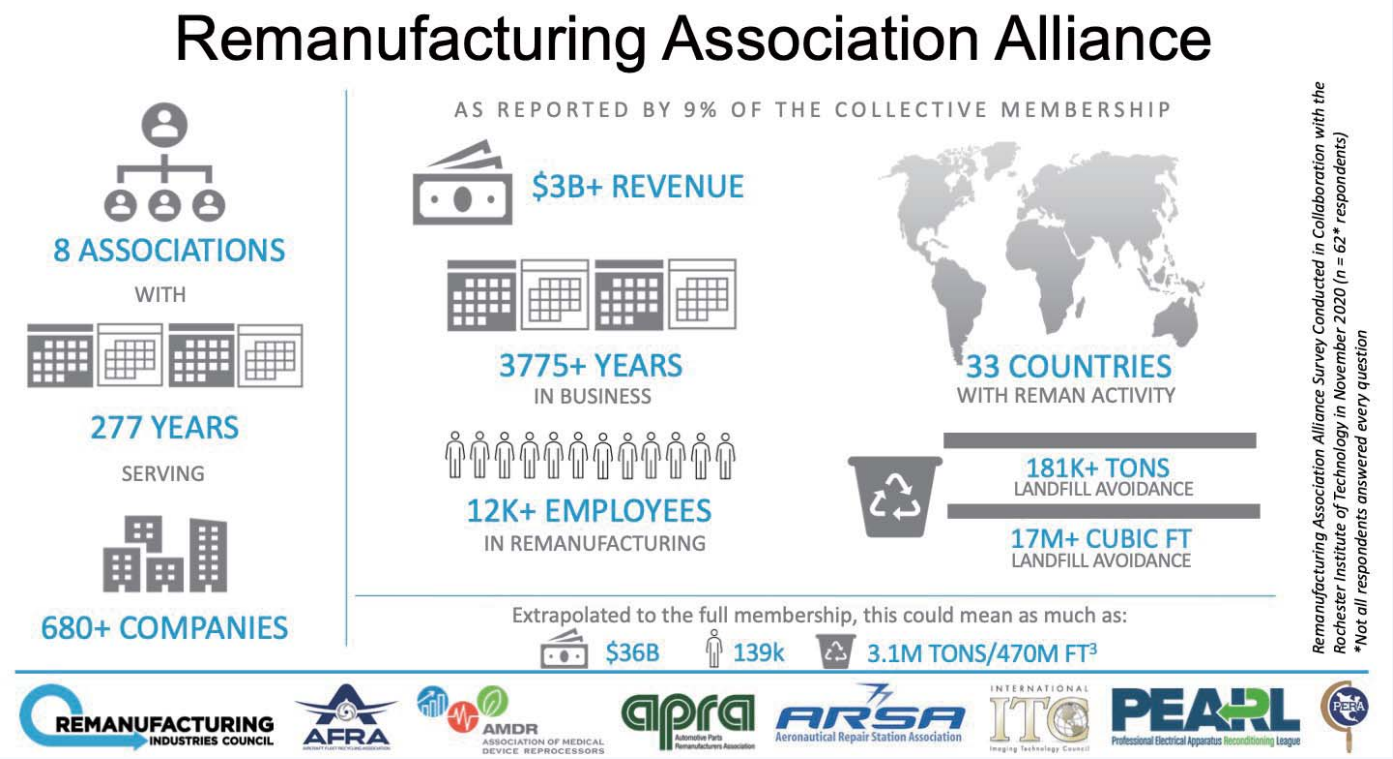
For twenty years, the International Imaging Technology Council has evaluated and monitored the STMC program, fighting for those who use it proudly and against those who misuse it.

Customers demand STMC. Join the hundreds of STMC-certified companies that these customers want to buy from. Get certified today. Contact katie@i-itc.org for more information.



for Remanufacturing and Resource Recovery, which has become a leading source of applied research and solutions in remanufacturing technologies. Sustainable production systems and the built environment are the focus of interdisciplinary academic and research programs within the Golisano Institute for Sustainability, which was founded in 2007.

The REMADE Institute is the only institute in the U.S. that is a public-private partnership committed to developing transformational technologies that can help develop a significant competitive advantage for our industry. The institute continually funds research proposals to underwrite new technology development in support of industry needs. The institute is a consortium and the benefits go to its members. Membership is open to any US company. The institute has about 100 members including leading industry like Michelin, Caterpillar, John Deere, and others. Major universities such as RIT, MIT, Georgia Tech, and the University of Illinois are members in addition to five national labs.

State of Reman 2020

In late 2021, the eight RAA members undertook the arduous task of surveying its members to determine the size of the industry and its environmental impact. There was some debate over the calculations and their extrapolations, but here goes:

- Remanufacturing companies generate $36 billion in revenue and employ 139,000 employees (all agree that this latter number is low). However, as an industry, remanufacturing diverts 3.1 million tons of waste from landfills. That's the weight of 918 aircraft carriers, 5612 locomotives and an additional 27,627 humpback whales. From a space standpoint, they divert roughly 470 million cubic feet of waste headed to landfills. That's the equivalent of 361 U.S. Capitol Buildings or filling the Dallas Cowboys' football stadium four-and-one-half times.
- The cartridge remanufacturing industry is a small share of those numbers, but they are mighty, nonetheless. From a revenue standpoint, the industry is still half small companies (under $1 million revenue) and the other half larger concerns. But their environmental impact is impressive. Clover Imaging, the global cartridge industry's largest remanufacturer, alone is responsible for five dozen of those locomotives and a bunch of whales. In addition, it has reforested more than 600,000 trees with its PrintReleaf partnership.
- North American remanufacturers divert enough waste to fill at least ten Empire State buildings. (These numbers have NOT been extrapolated across the membership and are therefore low). Their waste diversion could also fill the world's largest building, the Boeing Assembly Plant in Everett, Washington two and one-half times. This plant is used to manufacture Boeing's widebody airplanes including the 747s and 787s.

The cartridge remanufacturing industry is a small share of those numbers, but they are mighty, nonetheless.

These numbers turn heads, millions of them.

Original manufacturers tout their environmental benefits as well, as they well should, but none comes close to having that impact. And government has gotten serious about cracking down on the truth in environmental marketing. Recently, the Int'l ITC took HP to task over its environmental claims with its complaint with the Green Electronics Council. Most of the manufacturing environmental claims, at least in the printer cartridge industry, have come from their recycling efforts. These are to be lauded, to be sure. However, the reuse of a product is far preferable environmentally to recycling it.

Academics, business executives, government officials and industry associations have been working for more than a decade to improve and infusing millions of dollars into, remanufacturing. It has gained consistent acceptance in the business community, and it's only a matter of time before consumers are convinced too.

Remanufacturing is not a dirty little sister, she's a darling. ■

IN MY VIEW

Why remanufacturing will continue to be part of my business model

Russia

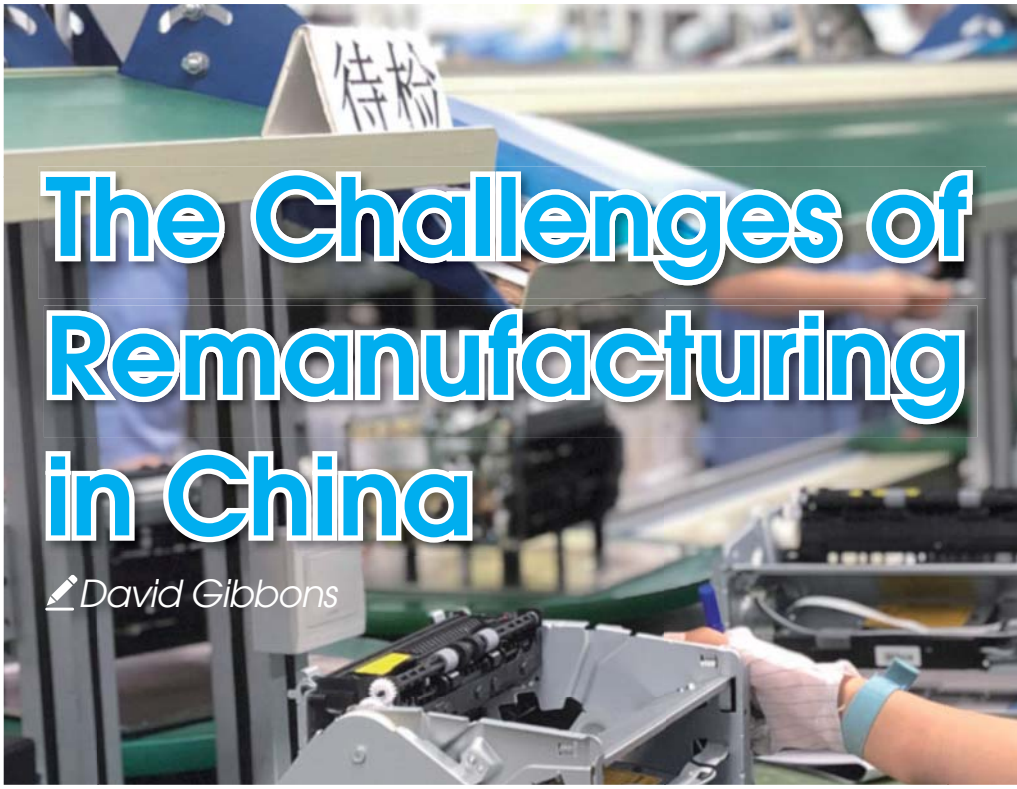
Marina Chromova
General Director, Uniton Service

Those who reuse and remanufacture cartridges demonstrate responsibility towards the world. In my opinion, the potential to remanufacture a cartridge is as important as cartridge quality. We not only consider the quality of prints but also a possibility of further being able to remanufacture and reuse the same cartridges. I am proud that our Uniton premium eco-protected cartridges can also be remanufactured by our customers multiple times.

India

Deoram Patel
Managing Director GPS Print Solutions

I started business in 2005 when refilling was the rule of the roost in India. I set up a factory and remanufactured MADE IN INDIA toner cartridges to comply with Government of India locally produced cartridge procurement rules. Today, I still have production lines for remanufactured toner cartridges to meet the demand for the very latest toner cartridges where compatible toner cartridges are not yet available. The ability to offer locally made reman cartridges within two weeks of the launch of a new OEM printer has won me many new customers and lots of new business.



The Challenges of Remanufacturing in China

David Gibbons

40 years ago, Arnald Ho established a ribbon factory in Zhuhai, China. The factory is deemed to be the first Chinese remanufacturing factory that opened the curtain for the development of the aftermarket printing consumables in China and Asia.

Ho saw how others in Western countries would assemble the ribbons in the cassettes ready for use in dot matrix printers. He was convinced, as a young 20-year-old at the time, that the smaller and more nimble fingers of the Chinese could rebuild a better cartridge more quickly and competitively. The Print-Rite legend was born.

Arnald Ho was the recipient of an award marking his 40 year founding of the aftermarket industry in Asia.

By definition, remanufacturing of printer cartridges is the recycling and reuse of used and empty OEM printing consumables. The price of a remanufactured product is usually between 20 and 80 percent of the OEM price, therefore, remanufactured printing supplies are very seductive to consumers and end-users.

Importing Waste for Recycling

In the 1980s, China began importing solid waste as a source of raw materials and for years it was the world's largest importer despite its limited capacity to process garbage disposal. Some companies even illegally brought foreign waste into the country for profit.

With the advent of the aftermarket, many used cartridges were imported to meet the demands for remanufacturing. Between 2000 and 2004, Guiyu village, located in Guangdong, broke down much of the world's discarded electronics including printer cartridges into reusable components. The rest was often burned creating an environmental disaster. The reporting of the dumping of used toner cartridges in Guiyu,

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China's electronic waste village, shocked and angered many in the global industry. It angered the Chinese government as well.

In 2017, China filed a notification with the World Trade Organization (WTO), informing it of its intention to ban imports of four classes and 24 kinds of solid waste by the end of that year. This included plastic waste from living sources, vanadium slag, unsorted waste paper and waste textile materials.

Three years later, China officials revised the content of solid waste import management in the law of the People's Public of China on the Prevention and Control of Environmental Pollution by Solid Waste. According to the revised rules, the importation of all solid waste into China would be banned as of January 1, 2021.

Along with the announcement of the revised rules, the Ministry of Ecology and Environment stopped accepting and approving applications for import permits for importing solid waste that can be used as raw materials. Those import permits that have already been issued should be used only before the expiry date noted in the permits. That means all permits will eventually lose validity beyond the given expiry dates.

The China Boom in Remanufacturing

Ten years ago, statistics reveal there were thousands of cartridge remanufacturing businesses in China. The aftermarket prospered so well domestically that the printer OEMs were only ever able to capture 40 percent of the total supplies market.

Remanufacturers looked for the empties in the booming markets of North America and Europe where the OEMs enjoyed a market share of up to 70 percent for monochrome and 90 percent for color.

Printing consumables industry chains were formed in the Pearl River Delta close to Macau and Hong Kong, Other clusters emerged in the Yangtze River Delta and Bohai Rim. Remanufactured products were exported to more than 120 countries and regions around the world. It was surely a triumph for the Chinese aftermarket to achieve such a result.

For this reason, two imaging supplies-dedicated trade exhibitions were born. ReChina Expo in Shanghai was the first to become the largest industry event in the world surpassing World Expo in Las Vegas. *RemaxWorld Expo* was born in Zhuhai which had become known as the printing consumables capital of the world. Visitors to the expo would visit the exhibits and then

Continued Page 18

IN MY VIEW

Why remanufacturing will continue to be part of my business model

Brazil

Eduardo Varela
Commercial Director of Diamond Brasil

During COVID lockdowns, some of our clients—being hospitals, laboratories or government departments—relied on a regular supply of printing supplies. As we emerged from the pandemic, I noticed remanufacturing supplies recovered quickly while compatible ones were much slower. Reman cartridges saved the day. We have all benefitted from the green wave knock on effect of COVID: healthier air, streets with less vehicle traffic and people working from home. This is another benefit the remanufacturing process provides. But let's not be fooled: unless government purchasing rules change in favor of remanufactured products, we will see the eventual return of compatibles.

China

Wendy Duan
CEO, Mito

Having focused on the remanufacturing of cartridges for 18 years, Mito continues to view this business model as a crucial part of its business. We insist on producing printer consumables scientifically to meet standards which meets the customers' expectations as well as delivering benefits for the environment. To this end, we work with our customers around the world and for the mutual development of the printer consumable industry.

IN MY VIEW

Why remanufacturing will continue to be part of my business model

India

Shrikanth Shetty
R&S Inc Bangalore

I have been in this industry since 1996 and remanufacturing continues to be a key component of my business today for three reasons. Firstly, I have knowhow on how to custom design solutions to fully meet my customers' expectations. For the latest new printer models my existing customers expect me to provide an immediate aftermarket solution which is only possible if I remanufacture their OEM toner cartridges. Finally, when I run out of new-build cartridge stock, I simply remanufacture the empties to get the same results.

Brazil

Israel Ostrowiecki
pioneer of remanufacturing

Ostrowiecki should be remembered to *RT ImagingWorld* readers for the remanufacturing visionary he was in Brazil. He founded the famous Brasilfax in 1987, which remanufactured seven million cartridges in its first 12 years alone. Think of the benefits to the environment hie and his company provided. If you were to place each cartridge he remanufactured end-to-end, it would be the equivalent of an extended road trip in a car from San Pablo to Salvador.

Continued from Page 17

tour the hundreds of factories within 50km of the expo. The expos were full of inks, toners, drums, chips and other component solutions for remanufacturers.

The Necessity for a New Business Model

Chinese remanufactured cartridges were also cost-competitive, thanks to lower labor costs, than remanufactured cartridges in the high demand global regions. The industry grew in part, because of the demand for Chinese remanufactured supplies.

However, the empty cartridge collection programs in Europe and North America became very sophisticated and the larger remanufacturers in those regions captured the lion's share of cartridge cores. International brokers also started to charge higher prices for the much-in-demand resources. Chinese remanufacturers certainly could not rely on the domestic supply of empties to obtain sufficient cores to remanufacture. The Chinese government's tightening on the imports of solid waste was another challenge. What had been a boom for remanufacturing in the years 1990 to 2010 became an impossible business model.

Along with the challenges came the maturation of the global industry in the form of mergers and acquisitions. Since 2011, a steady number of acquisitions occur each year. This was also true for the Chinese aftermarket as well. Through strategic integration, big remanufacturers became bigger and stronger while many small remanufacturers just disappeared from the industry.

In 2021, there are probably less than 100 remanufactures of OEM empty cartridges left in China. Some of the larger companies including the Ninestar Group, the Print-Rite Group and the Hubei Dinglong Group declare they still remanufacture OEM empty cores. The real number of remanufacturers is unknown because those who are remanufacturing do not have the legal permits to import the cores.

Since 2011, innovative-minded Chinese businessmen and women have looked for an alternative supply solution to supply the increasing demands of domestic and international markets. After all, all the components needed to remanufacture a cartridge were all now being made in China and all that was needed was the core.

The largest toner and ink, OPC drum and chip manufacturers in the world were now well established in China. The era of the "new-build compatible" (NBC) cartridge arrived. Today, NBCs have evolved to be able to be remanufactured as well, just like the OEMs. NBCs are remanufactured in increasing numbers in Russia, India, Africa, Latin America as well as China.

Looking in the long term, the Chinese all know that remanufacturing is the sustainable way to do business. The huge visibility of battery-powered buses, taxis and cars, the operation of clean-burning coal-fired power stations and the like reflects the Central government's policy to build a more environmentally friendly China.

There will always be a place for remanufacturing here too. ■

5 QUESTIONS

Winning the War that Needs to be Won

—ETIRA's president Javier Martinez is calling for mandatory rulings on cartridges and printers so consumers know how to choose what's best for the environment.

Where are you based and what has been your background in remanufacturing?

I trained as an environmental engineer and worked in a marine business from 1988 to 2002. Since that time, I have spent 20 years in this industry, firstly with Consuprint, then Embatex Iberia a subsidiary of the Turbon Group sister company caring for Spain and Portugal, and then Italy and France. I have been a member of the advisory committee of the European Commission for Imaging and Printing. I have been involved in establishing a new management model to turn waste into usable resource and to promote the necessary shift towards a circular economy. I am currently based in Viladecans which is just 10km from Barcelona Port and airport.

Is this why you recently accepted the role of president of the European association at this time?

I have been long-term member of the ETRIA board. The opportunity for change came along with some management adjustments. It's true you might see my face as the new president of ETIRA, but the opportunity to pull together a new hard-working board with members who are full of ideas and enthusiasm is the core reason. These members deserve the credit for the excellence they deliver.

Why is there an awakening by the public, media, and government to the role of the circular economy in Europe?

It is very simple. You too would be horrified when you are presented with the data on waste. It is horrendous. I invite you and the readers to discover it for yourselves and be informed. So, it is clear what Europe needs: less waste, more jobs and true product value. We are on the precipice of the cliff right now and I support the Bill Gates vision that climate change may hit us much stronger than what the pandemic has done. It's true.

What are the challenges you face in advancing the case for remanufactured supplies? The OEMs? Governments? Consumers?

Clearly the determination by the EU Commission is at the heart of the matter. Wherever you go or whomever you speak to, the message is always the same: "Voluntary schemes do not provide enough uptake." We need a clear determination. For some reason it is still missing. I often refer to Mario Monti whose determination changed the Automobile Industry for the benefit of the consumer. Where is our 'Monti' for printers and cartridges? There is no shortage of data and evidence of abuse. How else can consumers, without regulations in place know how to choose between a better performing reman product and a worse performing single-use new-build cartridge?

A growing reuse target must be mandatory, but we also need to prolong the usable life cycle for the printers as well. The data of the level of inefficiencies I have is incredible. There is a lot of work to be done.

What key initiatives would you like to see achieved in 2021 that will strengthen the case for remanufacturing?

Let's get the regulations in place first. This is the priority. However, there are others that may also help. The Green Public Procurement (GPP) in Italy, has set a mandatory reuse threshold. This was published at the end of 2020 and if understood and implemented correctly, will give top priority to reuse. The 'Third Country Operator' (TCO) which manages non-European operators, is about to launch a certification process for printers. These needs support. Also, I am thinking about a project called "European Cities Cartridge Reuse challenge." This means the measuring and setting of more ambitious targets. Let's see who the winner can be. ■

Javier Martinez can be contacted by email: <jma@turbon.de> or javiermz@etira.org

TURNING

GREEN INTO GOLD

—GM Technology's Zoltan Matyas reveals the business opportunities that achieved double-digit growth

I joined GM Technology in 2020 to drive international business development and lead the sales team. Here is my story of how we developed new business opportunities and drove the business to achieve double-digit growth within a year during COVID.

I still remember flying back to Barcelona on March 13, 2020, to find Spain, Europe and pretty much the entire world going into lockdown. The same day I was to start my new job…

The first two weeks in the headquarters in Seville in southern Spain was intense, inspiring and motivating. But it gave me ideas and a very clear vision. The company was already growing, and the challenge was to drive further growth, create new opportunities and leverage all that GM has to offer into the imaging aftermarket. I basically ignored the COVID facts (and the news) and rolled up the sleeves.

I immediately saw the unique "GREEN Opportunity." GM is a company with deep vertical integration, versatility, a dynamic fast-paced operating environment and the circular economy in its DNA. It's a driving force and a winning mix.

Turn the **green opportunity** into **gold**

GM Technology's focus is the copier channel. I started my transition from the printer and components industry into the copier channel back in early 2019. What is the difference?

Unlike the printer channel, the copier business is largely contractual based and the importance of concepts such as TCO (total cost of ownership) CPP, maintenance costs and profitability are the key factors of growth instead of hardware and cartridge prices. Its' a closed service and quality-driven channel with a very high barrier of entry. At the same time, the Return on Investment (ROI) is also higher.

"The key to my strategy during my entire carrier was always to create win-win opportunities and add maximum value through strong customer relationships."

According to IDC's "State of the Market March 2021," COVID created the following market scenario:

- A3 new machines shipments down to 20 percent;
- overall printer sales fell, on average by 6.2 percent—some like Sharp, Lexmark and Oki as low as 20 percent;
- 40 percent of workers work from a home office (24 percent more than pre-COVID);
- 14 percent decline in pages printed on A4 laser devices, with more on A3;
- toner unit sales were down 10 percent.

With page volumes dropping, A3 devices ceasing to print and OEM new equipment sales down, it caused a slowdown in second-hand machine markets too. We had a virus, climate change and an economic crisis affecting all aspects of every business at the same time. Not a landscape anyone could wish for.

So, at GM, we started working on cross-selling, up-selling, further vertical integration strategies, synergies and creating new sales opportunities.

What does GM Technology do?

GM is a complex but very dynamic organization with the ability to make quick decisions and with a high degree of adaptability. It is best described as small companies within the company:

- an OEM dealer (Sindoh, Pantum, Olivetti);
- Spain's top national MPS provider;
- manufacturer of the Green Line refurbished copier range;
- A full-scale remanufacturer of 50,000 toner cartridges per month with QC and R&D of our R-OEM and GEN copier toner range;
- a small wide-format printing company;
- provider of logistic services to hospitals; and
- the largest European second-hand copier broker;

As a second-hand machine collector and trader, our annual turnover is more than 80,000 machines. On any given day, you can find 15,000 machines on hand in our 11,000m^2 warehouse. We serve clients in all 27 European Union (EU) member states. We also ship out more than 600 containers a year to more than 60 countries.

The versatility of the different business lines has allowed me to identify synergies and programs, develop new value propositions and add more value to partners and customers. Here are a few examples:

Our experience provides us with the biggest QC, R&D, and life-cycle test lab in the industry. None of our competitors has this kind of direct access to such large-scale, real-life test data.

MPS Park

Currently, we run more than 11,500 machines in our own MPS park which we call EPS (Eco Print Solutions). They are remanufactured machines using our remanufactured toners—taking approximately 40 percent of our production volume.

In practical terms, it means in the event there are any batch issues, manufacturing defects, premature component wear or any other issue, we are the first to find out before our customers do.

Remanufactured Toners

The size and scale of the operation give us another unique ability. We reclaim the OEM toner from the hoppers of some selected machines on an industrial scale with a tried and proven in-house process. We stock the

bulk toner powder in 100kg barrels and fill them to cleaned and reconditioned OEM toner hoppers. This is how we produce the R-OEM copier toner product line-up providing uniquely high quality and totally circular economy solution to the copier toner aftermarket. All three component products are reused original products making it not only the best possible quality option but the greenest too.

When it comes to the machines, they are all collected in Europe from proximity markets. Most of them come back direct off-lease from end-users with very low counters. Sales pressure on manufacturers have caused contracts to be shortened and this has provided better and younger equipment to become available.

Green Line Range

Another key synergy occurs in our pre-selection of the very best equipment, which we separate and qualify into our Green Line production. We disassemble the entire unit, apply ultrasound cleaning and replace or recondition all internal and external components. By rebuilding all Green Line machines using strictly new or remanufactured OEM parts makes the operation the most ecologic in the industry. All machines are shipped with a unique "Manufacturer's Warranty" along with full test-cycle documentation.

All "base machines" for Green Line production are less than 2-3 years old. Most have never printed more than 150,000 A3 pages and less than 80,000 A4 pages. The process of collecting these machines from proximity markets and operating efficient, high-speed reverse-logistics gives us another unique advantage. We offer the latest and newest models in refurbished version rather than the older, discontinued models. The engines in the Green Line range are the same as those offered in brand new OEM machines.

These examples reveal our keys to success by efficiently combining business units, product lines to create unique advantages.

Partner Program

My shoulder-to-shoulder colleague, Jose Angel Muñoz, has years of experience in the second-hand machine trading business. He has laid down strong foundations for the partner programs. Our new, improved multi-level toner distribution partner program—with Silver, Gold, Platinum and Diamond level partnership levels—provides unique benefits.

We provide partner-level pricing, free shipping, quarterly rebate programs of up to 10%, annual bonuses, payment conditions and private label opportunities

We found we could increase value to MPS partners if we bundled the Green Line equipment with R-OEM or GEN toners. This gave birth to the "Circular Economy Partner" program. This allows partners who buy machines and toners to have maximum flexibility and unique ROI on MPS contracts by offering an environmentally sound alternative. By

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investing in a multi-language sales team, digital tools and a highly automated CRM system, we are able to offer am effective, efficient and unparalleled customer service.

As to the Future?

In spite of COVID we have had to grow staff, stock, the park and turnover.

Our Green Line manufacturing is currently running to full capacity. The heavier demand has meant that machines made to order are temporarily being delayed 15-20 days. We are in the process of doubling our refurbished equipment output to meet the market demand.

Our toner sales are close to a 100 percent YOY growth. We have also introduced new brands including Canon, Kyocera, Sharp and Toshiba. We continue to introduce new SKUs to the traditional lines including Konica Minolta, Ricoh, Xerox, and Lexmark products every month.

The recycled R-OEM products work almost instantly in every market.

Not only in the EU but also in a growing number of global markets we see the development of the green, circular economy agenda. Recently introduced EU policy initiatives affecting the cartridge remanufacturing industry:

- new public tender criteria for imaging equipment which clearly favors remanufactured cartridges;
- eco-design laws;
- printers and consumables need to comply with environmental standards including REACH, WEE and CLP;
- the EU Voluntary Agreement by the printer OEMs on environmental aspects;
- reuse regulations and laws in Italy, Czech Republic, France and soon in the UK.

With MPS being a CPP and profit-focused business our partners remind us: "It is a truly golden opportunity to run machines on 100 percent OEM component remanufactured cartridges with significant cost savings.

These external factors favor our growth and confirm we are on the right path. There is an invitation to become a GM Partner and to help take one more step to take remanufacturing to the next level.

I can say for sure; I will be making sure our partners are the first ones to benefit from it. In today's business climate, new opportunities are golden … but the color is green. ■

James Douglas

Remanufacturing the Customer's Cartridges In-store

The general rule for remanufacturing in a store environment is "refill if it is quick and easy if it offers a low failure rate and a higher margin."

As a distributor, I deal with three remanufacturing groups:

1.factories like Ninestar, Utec and Clover that supply ready for sale remanufactured cartridges,

2.factories that supply the components that remanufacturers and refillers need, and

3.the retail stores themselves that buy a combination of finished cartridges but also remanufacture or refill in-store.

All three groups have seen a relative decline in volumes due to a combination of cheaper new-build aftermarket products and increased technical hurdles. The move away from retail in-store remanufacturing of both inkjet and laser cartridges has been accelerated by the lack of current model chip resetters and more expensive replacement chips.

This has meant the ratio of new-build to remanufactured product has increased over time. At some point, the stores decide to quit in-store refilling altogether. Typically, they stop toner refilling first, followed by inkjet. As to the availability of chip resetters, I have had discussions with a number of the ink, toner and parts suppliers, suggesting that they fund the development of resetters. If stores can't reset chips, less will refill and sales in their supplies will be impacted directly.

In 2012 we purchased a supplies business in Australia. At the time, the business had dropped around 80 percent in turnover over the previous 3-year period. At the same time, 80 percent of sales were bulk ink. I worked with German-based OCP Inks and we were able to turn that around and increase ink sales. However, over the next four years, the ratio of bulk ink to total business dropped away. Sales in bulk ink had risen, but the importance in the total business had dropped as more and more stores had stopped refilling.

The lack of chip resetters combined with the availability of cheaper compatibles was the perfect storm. Many stores were not interested in the extra step of rechipping. As prices dropped on compatibles, the retail prices dropped and margins also declined. The knock-on effect was a decrease in staff numbers, leading to less time for refilling. Retail store layouts began to change. The former 1/4 retail space to 3/4 backroom office and refill workshop has reversed.

This decline saw the No.2 player, Sensient, pull out of desktop ink and the No.1 supplier, OCP go through some tough times, even though they have been able to survive.

So, is there a future for instore refilling and remanufacturing?

The general rule for remanufacturing in a store environment is 'refill if it is quick and easy if it offers a low failure rate and a higher margin.'

Refilling gives retailers in a store a Point of Difference. It can provide higher margins, is socially and environmentally responsible and can still be quick, easy and reliable if you stick to a subset of the entire range.

Is it less risky, legally, to sell remans?

It depends on who you buy from and how it's remanufactured. If the reman is a hybrid with an OEM shell or core with some new components added, then you have a responsibility need to check if the new parts being replaced infringe any patents. If the product is 100 percent remanufactured, it is always a safer bet. I advise buyers, distributors and retailers to deal with the bigger remanufacturing factories who pay for proper legal advice and will back up their product with an indemnity. They also demonstrate a corporate and social responsibility that is important to government and big business.

As Australia looks at its New Zealand cousins across the Tasman Sea, they note there has not been the same rate of decline in instore refilling and remanufacturing. Why is that? Are the New Zealander 'kiwis' more environmentally aware, are they more self-sufficient, or do they have better support from their suppliers? ■

James Douglas

James Douglas is an award-winning entrepreneur based in Sydney and has become a trusted supplier of imaging components and products and advisor for retail businesses across Australia. He is a recipient of the Excellent Service Award for his tireless efforts in personally driving to visit, train and mentor each and every one of his customers, providing them with dedicated support to remanufacture and sell high quality, non-infringing aftermarket supplies to their customers.

Barkha Mittal

Why Remanufacturing is Important

Every cartridge that is remanufactured is one that doesn't end up in a landfill.

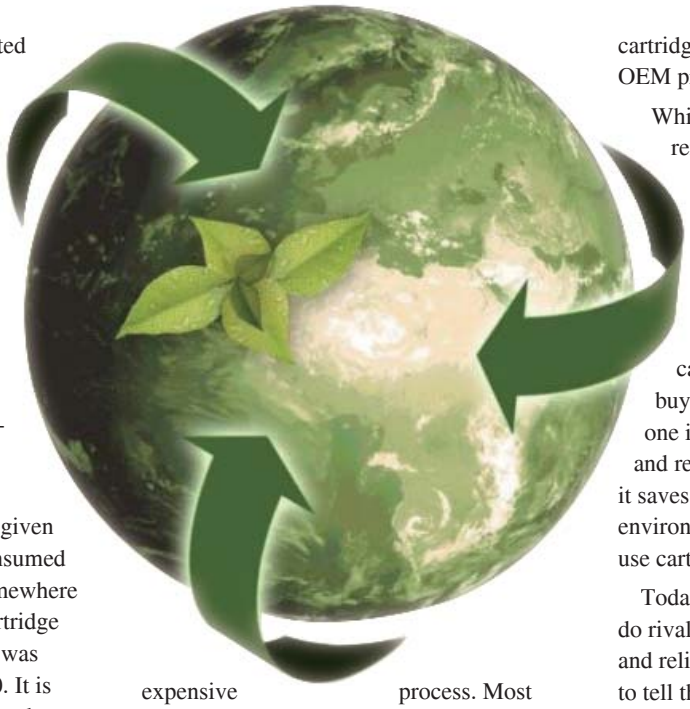
When I look back to when I started my cartridge remanufacturing business in 2011, I realise, as an industry, we have come quite a long way. I started out with remanufacturing then went into new-build compatibles and now I am in managed print services. As delighted as I am to have been a part of this industry for more than 10 years, what makes me more pleased is that I am still glued to the roots: I am decidedly for green-remanufacturing.

The remanufacturing of printer cartridges has always been critical given the huge numbers of cartridges consumed and thrown away every second somewhere in the world. The Indian printer cartridge market where I focus my attention was valued at USD 456 million in 2020. It is projected to reach USD 1055 million by 2026.

As consumption increases, the requirement for new cores increases and so will be the challenge to dispose of end-of-life (EOL) cartridges. Though there are guidelines in place by the central pollution control board (CBCB) for disposing of waste printer cartridges, which fall under the hazardous category, most of the time these waste cartridges get tossed into a bin. This is mainly because printer cartridges—unlike other electronic waste like laptops and computers where consumers pay to dispose of their waste—can be gotten rid of by consumers like regular rubbish.

Remanufacturing is the key method to prevent waste cartridges from reaching landfills while it promotes clean and green development. With that, I mean remanufacturing of both virgin cores as well as compatibles.

However, there are challenges associated with both. In the case of virgin cores, the collection from the customer is an expensive process. Most remanufacturers have found the cost of buying the empty cores from brokers ready for manufacture is greater than the price they can purchase a finished compatible cartridge ready for use. Whereas, in the case of compatibles, there is a minimal possibility for remanufacturing as most of the cartridges are designed for single-use only and most are thrown anyway after just one cycle.



A circular economy aims at changing the predominately linear take-make-use-throw economic model into a circular take-make-use-remanufacture-take and definitely, only virgin cores fit here. The ideal is to help companies buy back the empty cartridges multiple times and remanufacturing them multiple times to minimize the per-page-cost over seven to eight life-cycles.

Every cartridge that is remanufactured is one that doesn't end up in a landfill. It also means one less manufacturing of a new core. Isn't that wonderful? It saves the environment and resources at the same time. Businesses significantly reduce their carbon footprint by opting for remanufactured cartridges as well as saving the cost of a new OEM product.

While many companies have embraced remanufactured cartridges out of a desire to be green, reducing the bottom line is still the biggest motivating factor. Many customers still choose to buy single-use compatibles over remanufactured ones. Thanks to the "Make in India" campaign, organizations are urged to buy local. This is serving a dual purpose; one is the obvious benefit to local refillers and remanufacturers. On the other hand, it saves the country from one of the biggest environmental, nuisance-dumping of single-use cartridges.

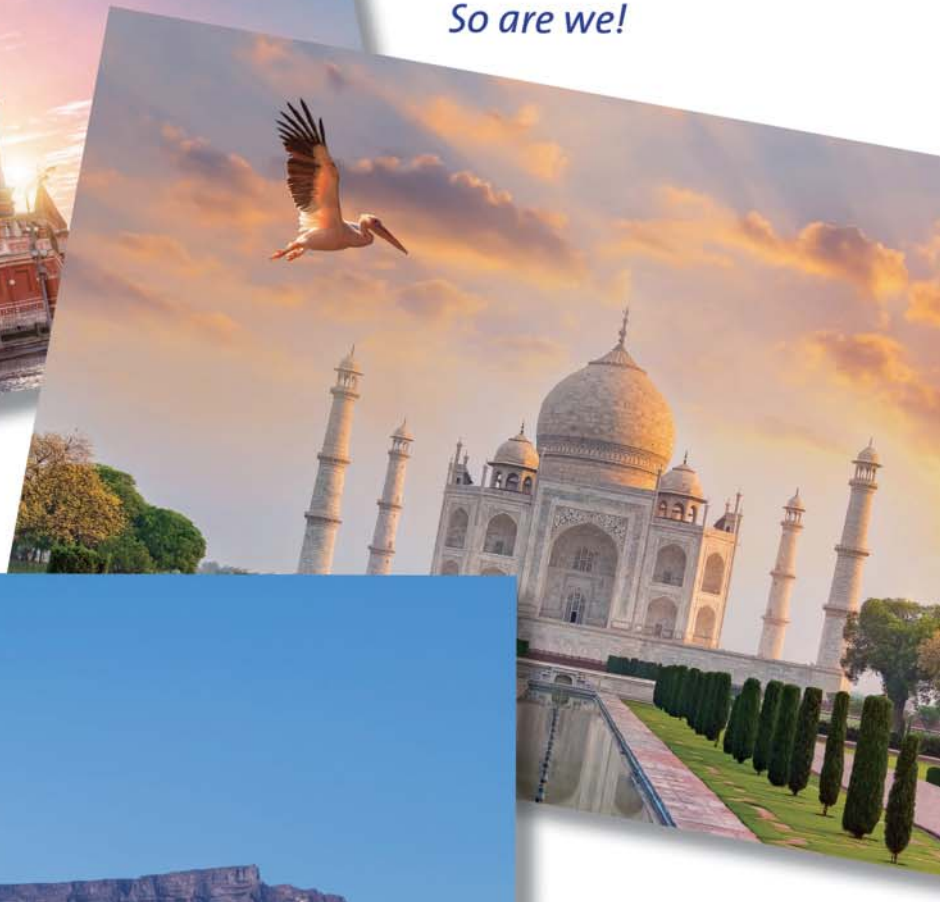
Today's remanufactured cartridges truly do rival the original in both performance and reliability. More often than not it is hard to tell the difference between the two and many are satisfied with the results of the alternative.

It's not uncommon for executives and office managers to spend hours researching ways to be more cost-effective and environmentally friendly. Remanufactured toner cartridges serve both needs in a simple, accessible way. They help reduce greenhouse gas emissions and keep spent cartridges from ending up in landfills. The switch requires zero effort and doesn't compromise print quality.

Now that you've learned a bit about how beneficial remanufacturing is, you can make an informed decision about what works best for you! ■

Barkha Mittal

Barkha Mittal is a managed print services specialist, a start-up enthusiast and an entrepreneur. She provides services including strategic planning, file management, IT consulting and financial analysis. She is based in Mumbai, India.



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Steve Weedon

Making NBCs Remanufacturable

There is, of course, good and bad in everything. There are good remanufacturers and bad ones. Similarly, there are good new-build compatible makers and bad ones.

From the outset, every company decides its position, its principles, its standards and its environmental responsibilities.

There's usually a short, well-crafted paragraph headed "Mission Statement." The succinct, to the point message, let the world and your employees know where you come from. The mission statement is out there for all to see and all to comment upon.

Remanufacturers have mission statements usually striving for customer service excellence and to recycle for reuse. There are many remanufacturing industries basically saying the same thing in their mission statements: recycling for reuse, eco-friendly companies collecting used products for recycling, remanufacturing and resale, usually cheaper than buying new originals. It is a great sales pitch: cheaper for the customer, better for the planet, no need to buy another expensive original, comes with warranties and everyone wins.

New-Build Compatible (NBC) cartridge manufacturers also have mission statements.

These messages also decide the company's position in the marketplace, its standards and its environmental responsibilities. These are companies that have reverse-engineering expertise and a perfectly legal process—providing you came by the sample to reverse engineer legitimately.

When you think about it, where would the world be without reverse engineering? It is the way we continue to improve. Reverse engineering discovers the technology, science, materials and patents showing how to make it better, faster, cheaper without infringing valid patents. If you can do it well, you could have a tiger by the tail.

There is, of course, good and bad in everything. There are good remanufacturers and bad ones. Similarly, there are good new-build compatible makers and bad ones.

In our industry good remanufacturers started out collecting used OEM virgin cartridges and remanufactured them time and time again. The model meant that the remanufacturer owned the end-user relationship so he could recover the cartridge and recycle it again and again. Using long-life components meant fewer components needed to be replaced on the second or subsequent recycling cycles.

However, when remanufacturers began focusing on selling to resellers and not end-users, they lost control of the end-user relationship and the cartridge was lost to them. Collection companies pick them up and broker virgin empties and non-virgin empties to those that want them. Most remanufacturers only want virgin empties since they are cheaper to recycle and the eco benefit of multiple times recycling has, as a consequence, been vastly diminished.

In our industry, good NBC makers are those who invest in reverse engineering talents, redesigning to produce a high-quality performing alternative to the OEM original without creating a product that infringes valid registered patents held by OEM. "IP Safe" products are not new, in fact. In our own industry, "IP Safe" imaging products pre-date inkjet and laser cartridges and were first introduced in 1984, long before the first laser cartridge remanufacturer started.

Remanufacturing

What makes a good NBC maker a great NBC maker is when the "IP Safe" cartridge is also designed to be remanufactured using standard parts and supplies, just like an OEM original can be remanufactured.

So, credit due where credit is due: the IP Safe compatibles from the Print-Rite Group have always been designed to be remanufactured using standard replacement parts and supplies.

Quality, non-toxic, "IP Safe" NBCs do not happen by chance. You cannot achieve these results by making a "clone" cartridge—defined as an exact replica of the OEM. Nor does it happen, by definition, when a manufacturer infringes any valid patent owned by an OEM. That's pretty easy to do and not much talent is required. Such companies are focused on cutting costs and growing revenues and hoping not to get caught. These companies feed the counterfeit trade that costs the OEMs millions of dollars each year. These are bad NBC makers who certainly don't have any interest to make their cartridge to be remanufactured.

There are good remanufacturers just as there are good NBC makers who have good mission statements containing meaning, intelligence and integrity. It is a mistake for remanufacturers, no matter how big or small, to make non-sensical claims that all NBC makers are bad. It's an even bigger mistake for their customers whether resellers, dealers or distributor alike, to blindly believe these statements as being factual when they are nothing but fiction. It seems some remanufacturers have nothing else to say or offer.

NBCs can be manufactured using technologies and patented work-around solutions so as to not infringe valid OEM patents. They are made to a standard so they can be good candidates for reuse and remanufacturing, under the right to repair doctrine since they are, IP safe and remanufacturable.

It is a matter of what is your "Mission." ■

Steve Weedon

Steve Weedon is an award winning CEO who has held senior management positions at various OEMs as well as Katun Corp, Static Control Components and Cartridge World. He was the original founder of The Recycler Magazine and of trade shows in Europe. He is currently CEO at Print Rite Europe Ltd, Print Rite Pelikan Germany. Contact Weedon at <stevew@printrite-eu.com>

Remanufacturing in Latin America

Seen by many as a "garage" or fringe industry, printer cartridge remanufacturing unintentionally became an exemplary circular economy pioneer business.

Towards the end of the 80s, some entrepreneurs began to observe the possibility of reusing a product destined to be buried, proposing benefits such as the reuse of exhausted products, reduction of natural and energy resources necessary for the manufacture of cartridges and components and a significant cost reduction compared to original products. In Latin America, remanufacturing was also an important source of local jobs.

Who has Taken my Cheese?

"In printing services there are customers committed to the environment and demand circular economy solutions," says Jorge Peña from ABKA COLOMBIA S.A.S.

Little by little, the sector was compressed, because of the consolidation of the market, but especially due to the penetration of new-build compatible (NBC) cartridges at a very low cost throughout the region. They have captured a large share of the market. When we add to this, the global trend in the reduction of the volume on printed pages accelerated during the pandemic, remanufacturing is seen by some as a business of the past.

Those who with a more commercial profile in the region were the first to dismantle their reman workshops and migrate to a business selling compatible. But many of those who treated remanufacturing as an industry, with production processes and quality

Remains Viable

Gustavo Molinatti

standards coupled with a responsible commitment to the environment, are still active, with remans being, at least, a part of their product portfolio.

Some cartridge models are not remanufactured because the price of the NBC is so competitive. However, there are opportunities with others. Jorge Peña from Abka Colombia, says his company "remanufactures Ricoh equipment among other toner cartridges." However, the "HP and Canon type cartridges are not feasible when compared with the NBC." When asked about which type of clients use the remans, Jorge clarifies some clients are committed to the environment and demand a circular economy solution."

Certain hard-to-find models can be cost-effective because of the high cost of original and quality NBC cartridges. María Dolores García Ramos from Fixsell del Norte, Mexico, said, "We have been remanufacturing Konica Minolta color for a long time and we sell the remanufacturing kits that we buy from different suppliers in China." Ramos added that "The reman Konica Minolta color cartridges are excellent and many end-users want them, but the empties are difficult to acquire."

"Low rotation cartridges and immediacy are an opportunity for local remanufacturing", John Corrales de Megatoner (Medellín)

The shortage of empties and the need for a prompt response remains an area of profitability for many collection companies. Overall, the business will have lower volume, but can maintain better profit margins. John Corrales de Megatoner, from Medellín (Colombia) reflected on this opportunity. "Our

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market has changed, and although our company mostly imports compatible cartridges, there are cartridges that due to their low turnover are not profitable for the manufacture of NBCs. This is a great opportunity for local remanufacturing." This highlights that a clear opportunity for remanufacturing is "the immediacy of the product, since the development of a new product takes more time and printer brands are constantly introducing new products."

Some entrepreneurs have taken advantage of the tank-based inkjet devices, a segment that had already been showing global growth, especially in the Latin region, and that the trend of work from home pulled even more. Jorge Arias, from Cintas, Tintas y Toners based in Bogotá (Colombia) perceives the remanufacturing of toner "is greatly reduced because the Chinese NBCs are very cheap and there is fierce competition in this segment."

The Environment is Still an Opportunity

Fortunately, there are companies that still maintain an active care for the environment and look for suppliers that are aligned with these values. Daniel Abbate from Silog Argentina affirms that "we are currently increasing remanufacturing, replacing alternatives at the request of customers."

"We are increasing remanufacturing and the issue of National Industry and the Environment is beginning to make a solid impact", Daniel Abbate from Silog Argentina

According to Eloy Ríos of Cadtoner México, "many remanufacturers would like to see a future where remanufacturing will once again be 'king' and the NBCs will disappear. But the truth is no one believes it will be like that. However, we believe that remanufacturing will not disappear, but it will have to reinvent itself to survive and thrive—both in the way of selling and in the market niche it will serve."

Ríos observes, "there is a growing awareness about ecological issues and those remanufacturers will have to focus on looking for the type of customers that see the importance in it. For example, companies that have ISO-14000 are obliged to give preference to ecological suppliers."

When asked about his vision for the future, Ríos predicts, "a future where the remanufactured and the compatible cartridge coexist for different market segments" and where "the worst thing you can do is try to compete with the remanufactured cartridge in a market where the only value of the product is the price".

A Viable Business?

Remanufacturing in Latin America is still alive and still offering many business solid opportunities. Their volumes and margins are certainly not those of a decade ago, as reflected throughout the printing supplies industry. Those who have managed to intelligently adapt to changes with a mixed offer of products and services continue to offer remanufacturing in certain niches where interesting profitability rates are still preserved. ■

"There is a growing awareness about ecological issues", Eloy Ríos from Cadtoner México

Gustavo Molinatti

RT Global Partner for Latam

Molinatti is based in Buenos Aires, Argentina and is publisher of Guía del Reciclador—the Spanish language magazine first published in 2002 for the Latin American printer cartridge aftermarket. He has organized more the 20 technical and MPS training events in several countries and is helping RT bring VIP Expo events to Brazil, Argentina, and Perú. Please contact <info@guiadelreciclador.com>

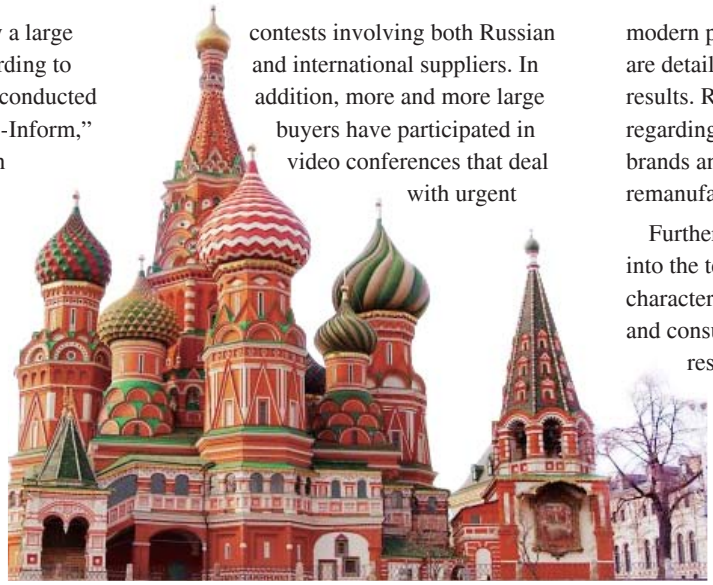
Dr Stanislav Malinskiy

Remanufacturing Thrives in Russia

The Russian industry must establish benchmark standards and prohibit those manufacturers and suppliers of low quality, remanufactured products.

Remanufactured products enjoy a large slice of the Russian market. According to estimates provided from research conducted by Information Agency "Business-Inform," 65 percent of all cartridges used in Russia during 2019-2020 were remanufactured.

In the remanufacturing survey of 170 quality remanufacturing centers across Russia in 2020 the agency also revealed a significant number of quality New-Build Compatible (NBC) cartridges were remanufactured as well as the OEMs. The share of remanufactured/refilled NBCs in 2020 constituted 20.9 million units, representing 48.9% of the total number of remanufactured/refilled cartridges.



Remanufactured products vary in quality in Russia. Unfortunately, the number of low-quality cartridges that are remanufactured using cheap toners and component parts still occupy a significant part of the Russian market. For this reason, remanufactured cartridges are no longer considered in the tender-procurement process for office materials in a majority of large Russian organizations and commercial businesses.

The Russian industry must establish benchmark standards and prohibit those manufacturers and suppliers of low quality, remanufactured products.

To this end, the work of Information Agency "Business-Inform" and the Russian-based AQCMS association has been directed at promoting those quality products coming from the remanufacturing industry. And it has already started to bear fruit. The number of supplier-companies of quality consumables and their corresponding buyer-companies continues to grow.

The agency, together with the association continues to run a series of quality printing contests involving both Russian and international suppliers. In addition, more and more large buyers have participated in video conferences that deal with urgent issues of quality evaluation and cartridge re-use.

By the end of 2020, it was the Russian buyers who initiated the defining requirements for "high-quality" cartridges and cartridges of "confirmed quality". In 2021, it was the large buyers again initiated the three Open Quality Printing Contests—for Kyocera cartridges, for HP cartridges and for Ricoh/Konica Minolta consumables. It is the interest coming from the large buyers towards quality products and their reuse that now drives the development of the Russian cartridge remanufacturing industry.

A number of educational events are now dedicated to the quality of office printing systems and issues related to remanufacturing (reuse) of printing devices (printers, copiers, MFPs) and corresponding consumables. The disciplines related to these topics are already being taught in a number of Russian universities. It should be noted that those who attend are not only students but also the specialists of large Russian businesses—the buyers and users of printing devices and corresponding supplies. Up-to-date information regarding modern printing equipment and the features are detailed, as well as the latest testing results. Recommendations are also provided regarding the choice of alternative cartridge brands and the possibilities of them being remanufactured.

Further, state support is given for research into the technical, economic and ecological characteristics of the latest printing devices and consumables used in Russia. Such research is costly and it has only been the support of the government that has made it possible. The opportunities to perform official testing and receive expert opinions regarding the quality and sustainability of consumables represents significant support for the Russian remanufacturing industry.

On the whole, the possibilities for remanufacturing in Russia continue to be quite positive. The growth of quality cartridge sales represents the necessary base (empties) for a functioning industry. By conducting contests, video conferences and technical and ecological research the necessary true-to-the-facts information for development are provided to all parties—the industry, government and buyers. Having solid education on remanufactured as well as potential products for buyers will continue to drive the many benefits of remanufactured products into the millions of offices of Russian organizations and businesses. ■

Dr. Stanislav Malinskiy

RT Global Partner For Russia

Dr. Stanislav Malinskiy, the general director of BUSINESS INFORM—an information agency based in Moscow—is mainly active in researching and consulting on the Russian office equipment and supplies market and also has over 250 scientific works and articles to his name. He is chief editor of the Russian catalogs of printers, copiers, MFPs, and supplies.

Dhruv Mahajan

Remanufacturing Printer Consumables in India

Reman has become a quick-fix solution for end-users using the very latest printer models

When asked to write about remanufacturing in India I asked myself, "why write about a shrinking segment of the market today?"

The truth is that new-build compatible toner cartridges imported from China dominate the Indian market with almost 85% share of the total market and OEMs have the rest of the business.

Only a handful of players who have refused to change still remanufacture cartridges in India. Just six years ago reman cartridges accounted for 30% of the total market of approximately 1,500,000 toner cartridges per month.

The 2020-21 financial year ending March 31, 2021 has seen a decline in the use of toner cartridges due to the pandemic and an 8 percent contraction of India's GDP. More than 300 major remanufacturers now also sell new-build compatibles or only sells imported cartridges having shut their reman toner facilities in order to compete and survive. Today, I estimate remanufacturers have less than two percent of the total industry and manufacture between 20,000 and 40,000 cartridges per month.

Reman has become a quick-fix solution for end-users using the very latest printer models where compatible toner cartridges have not been launched waiting for the development of chips. The OEMs all use a strategy where they frequently launch new models with minor changes to preserve their market share and profits.

Made in India

The Indian government is now making it mandatory for all government and public-funded organizations to procure everything they use through a central exclusive procurement portal www.GeM.gov.in This sector consumes about one-third of the total market, including printer consumables.

This is part of the incentivizing policy for products "Made in India" and also a strategy to be less reliant on products "Made in China." Many sellers to the government are scrambling to restart their old factory facilities to remanufacture toner cartridges that qualify for brand registration as "Made in India."

However, the government is yet to release the fine policy details for "Made in India."

In the event reman cartridges are kept out of the yet-to-be-finalised policy, then those targeting sales to government users will have to set up a factory for assembly of new-build toner cartridges just like the factories in Zhuhai and across China. I know a few factories that have started to manufacture "Made in India" toner cartridges and this trickle could quickly become a torrent.

Refilling

In India, there is also a very large and prevalent cartridge refilling industry. There are about 100,000 refillers spread across the nation and present in every town. It is correct to say that India has a very large remanufacturing service business and also a very small remanufacturing industry for aftermarket printer consumables.

The cartridge refillers have very loyal customers who refill each cartridge to meet the requirements of each individual customer, each of whom has differing expectations of quality and price. These refillers should be seen as mobile remanufacturing units as many visit the customers' premises on a periodic basis to fill all the empty cartridges.

Thanks to the pandemic, many organizations stopped the refillers from visiting their offices. This due to the COVID ban on all visitors as well as the reduced demand for printing in most offices. Refillers have responded by collecting empties from the customer or third parties and refilling the required cartridge SKUs in their homes/factories and delivering refilled cartridges to their loyal customers. These refilled cartridges or "custom rebuilt cartridges" are usually sold at a premium to the end-users. With market prices of new-build compatible cartridges decreasing, refillers in the past year are finding it more profitable to sell these cartridges using their own branding to their loyal customers. The more dynamic refillers are now happy to be seen as scaled-up businessmen who don't have to get their hands dirty with toner to earn a living as a refiller.

Another hurdle for both refilled and fully remanufactured cartridge Indian businesses are the very substantial toner tax increases announced by the government on imported black bulk toners. This was in response to lobbying by India-based toner manufacturers claiming toners from China and Malaysia were being dumped in India at very low prices. This has increased the cost of locally "Made in India" reman and refilled toner cartridges. At the same time, no levy was placed on finished toner cartridge products, including the new-build compatibles.

The trend is clearly visible. New-build compatibles from China will continue to increase their share in business until the "Made in India" toner cartridges find a business model to become profitable. This can only happen when Indian entrepreneurs establish factories to cater to both local customers and global demand. ■

Dhruv Mahajan

RT Global Partner for India

Mahajan is based in New Delhi as the International Business Development Manager for OCT Imaging responsible for the Gulf and South-east Asia regions. Mahajan is partnering with RT to bring VIP Expo one day intensive events to cities in India each year. The OCT Imaging factory in Zhuhai has manufactured printer cartridges and distributed Mitsubishi drums and toners since 2011. Please contact him at<dhruvm@oct-imaging.com >

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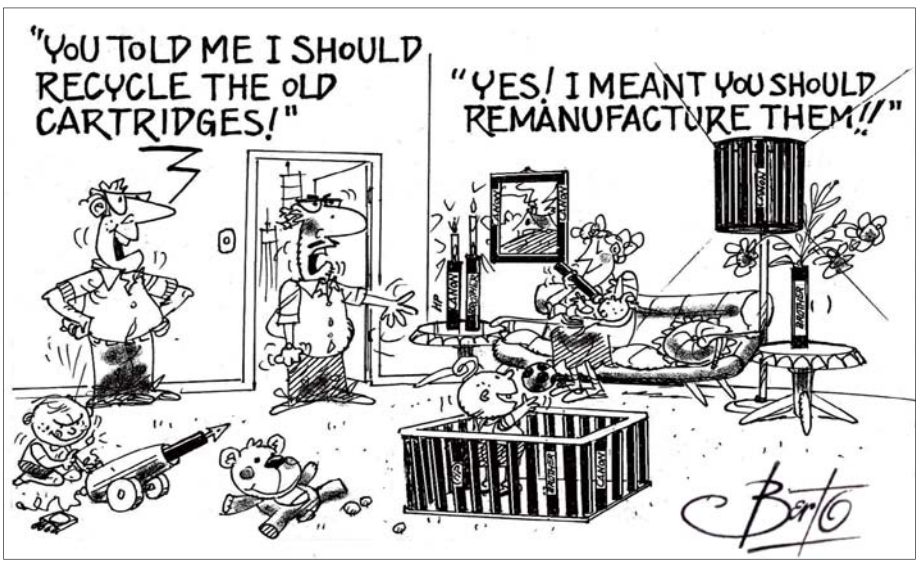

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