

Tracey Rawling Church, Director of Brand and Reputation, Kyocera Mita (UK) Limited:

Resource efficiency has been a key focus for Kyocera since before I joined the company 18 years ago. Our product design is driven by a desire to avoid unnecessary waste by minimising the resources consumed by the product during its manufacture and use. In the case of laser printers, the original product design supported a business model that was designed to maximise the revenue opportunity from consumables sales. As a result the cartridge was made as complex as possible so that a premium price could be justified. That meant that every time you ran out of toner powder, you had to discard everything that was mechanically clever about the device – a bit like replacing your car engine when you run out of petrol – so its components were designed to be disposable. Kyocera applied its expertise in industrial ceramics to develop long-life components that would last for 300,000 pages, resulting in a printer that was effectively cartridge-free.



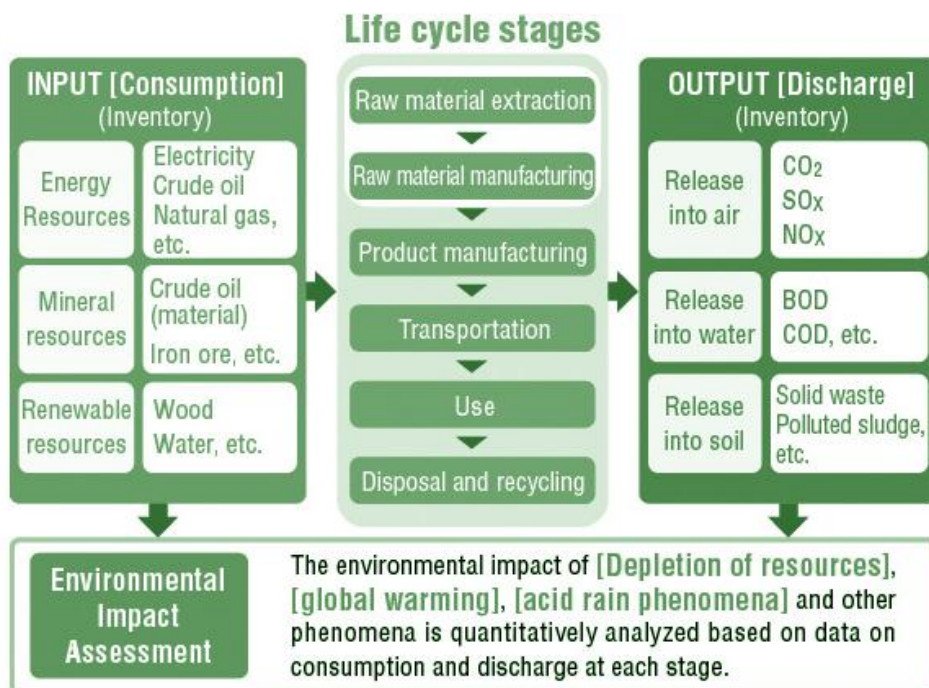
Conventional toner cartridge
Contains over 60 components made out of various types of metal, plastic and foam



Kyocera toner cassette
Contains 5 pieces made out of 2 types of plastic, ID coded for easy recycling

This innovation offered significant environmental advantages. As you can see, a conventional cartridge contains a large number of components, made from a variety of different materials. Typically it's just over a kilo of steel, aluminium, rubber and several types of plastic, all materials that should be returned to the economy. Some cartridges do get refurbished and refilled with toner – but this can only be done a handful of times. And because of its complexity, it's just too difficult to dismantle and recycle so at the end of its life, a cartridge's most likely destination is landfill. It's estimated that 47 million go to landfill each year in the UK, representing over 50 thousand tonnes of resources lost to the economy.

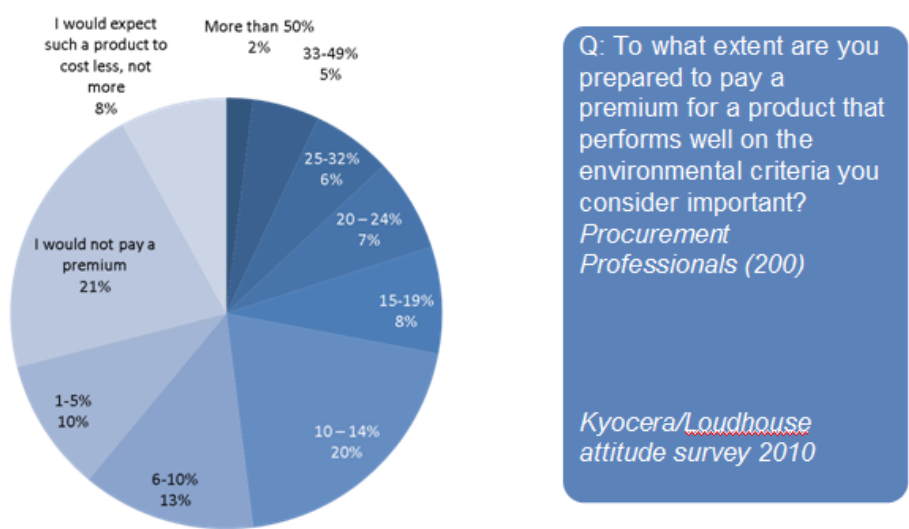
By building the majority of these components permanently in to our machines, Kyocera reduced our consumable to a plastic box, a spindle and a couple of cogs – easily reduced to its component parts for recycling. It's clear to see how this drastically reduces resource consumption in the use phase, but attention is paid to resource efficiency throughout the entire product lifecycle.



We perform a full lifecycle analysis – greatly simplified in this diagram - on every new device, carefully selecting the raw materials for products and consumables and developing products that aim for a reduction in the use of power and other resources at every stage. We also design our products to be durable, easily disassembled and upgradable, all with the aim of minimising resource consumption and increasing customer value.

When we launched this technology in 1992, sustainability wasn't even on the corporate agenda so we quickly learned that environmental benefits would not sell the product. Fortunately, designing out waste also meant our consumables cost significantly less, so we were able to go to market on reduced whole life cost until sustainability became a mainstream corporate issue.

In the last couple of years, increased focus on CSR coupled with rising energy costs and the CRC has created a kind of perfect storm for a technology like ours that reduces both costs and environmental impact. Consequently, we're enjoying unprecedented growth. But as a challenger brand, we still struggle to erode the market domination of the conventional, cartridge-based printer vendors for a number of reasons.



The disappointing fact is that, for all the rhetoric about best value and sustainable procurement, most buying decisions – especially in public sector - are still determined by the box price. Green credentials and low cost of ownership will get you on the shortlist, but the final decision usually comes down to who is prepared to discount the hardware by the largest percentage – and, in our industry, that favours the conventional vendors who know they can make up any loss on the hardware through a lifetime of supplies revenue.

This approach also makes it difficult to gain acceptance for a more resource-efficient solution that might cost a little more up front, but will more than compensate in terms of reduced operating costs. Our market hasn't fully woken up to the issue of resource security yet, but it is fully sensitised to energy costs. Even so, most business purchasers only pay attention to energy efficiency at the tender stage and are driven primarily by ticket price when it comes down to final selection.

And finally, the product centric procurement approach taken by most large organisations, especially in the public sector, makes it difficult to propose innovative service-based solutions. If a vendor receives an invitation to tender for 500 devices of this size and that speed then they have to respond on that basis, even if they know that by adopting a managed service approach they could deliver a solution that would not only be more resource efficient but also cost less over the life of the contract. And, given the scale of the current economic challenge, that's doubly frustrating.

What we'd like to see is whole life costing – including both direct and indirect operating costs – applied to procurement decisions in place of the ticket price, and tenders written on the basis of the desired outcome – in cost saving or emissions reduction – rather than around a product specification. This would encourage more vendors to innovate for resource-efficiency throughout the entire product lifecycle and reward those whose products and services achieve the greatest improvements in resource efficiency.

We would like to challenge our industry to be more ambitious in looking for ways to make its products more resource efficient. But our experience working on the consultation for the Energy Using Products Directive is that progress is often hampered by the desire to defend existing revenue streams and reluctance to move away from the status quo, leading to incremental rather than disruptive change. To try and address this issue, we're working with Intellect on the industry consultation for the revised Greening Government ICT initiative and the updated Government Buying Standards. We're also actively engaged in the stakeholder consultations for revising the EU Ecolabel and Green Public Procurement code. And, of course, we are partners with the Green Alliance on the Designing out Waste workstream. Our focus is on broadening the agenda beyond the usual suspects of energy efficiency, packaging waste and pollutants to include design for disassembly, modularity, upgradability and extended product life. If we can influence changes in procurement policy then industry will have no alternative but to adapt.

Finally, you might be wondering why Kyocera persisted for so long with a business model that flew in the face of our industry's established business model, especially in the early days when sustainability was such a low priority for business.

Corporate Motto

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Respect the Divine and Love People

Preserve the spirit to work fairly and honorably, respecting people, our work, our company and our global community.

Management Rationale

To provide opportunities for the material and intellectual growth of all our employees, and through our joint efforts, contribute to the advancement of society and humankind.

Management Philosophy

To coexist harmoniously with nature and society. Harmonious coexistence is the underlying foundation of all our business activities as we work together to create a world of abundance and peace.

The answer lies in our corporate culture. Kyocera's founder, Dr Kazuo Inamori wanted to create a business where respect for people and planet was a founding principle. As a result, our entire business strategy is based on the philosophy that if you do the right thing as a human being, profit will naturally follow. The result is a corporate culture where sustainability and resource efficiency are just part of business as usual. And that, as it turns out, is a great source of business resilience in these challenging times.

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trc@kyoceramita.co.uk

<http://twitter.com/traceyrc>