



# Breaking 'The Gartner Code'

## The fact and the fiction behind print reviews

## THE RISE OF OFFICE PRINT COSTS

In 2001, the international research group, Gartner released a briefing paper titled 'Rightsizing Output Fleets - The Hidden Gold Mine'<sup>1</sup>. This research paper identified total print costs to be as much as 1-3% of an organisation's revenue, a figure far higher than anyone had previously suggested. Gartner argued that print costs are so high they offer a 'gold mine' for any procurement or IT manager looking to make savings.

The print and copier vendors seized Gartner's report and twisted the data to promote multi-functional equipment as the simple answer to achieving the savings. So procurement and IT departments have been inundated with offers for a free 'print cost review' that will uncover Gartner's 'hidden gold mine' of potential cost savings. Yet many of those managers who have had a print review have been disappointed by the results, discovering that it has been no more than a guise to sell more equipment.

This White Paper uses NewField IT's analysis of more than 22,000 devices in ten different countries over the last two years to separate the fact from the fiction behind print costs and clarify what makes a good print review. Our research has identified more than £6 million of direct savings for more than 20 different organisations. So, whether attempting to understand the costs through in-house research or using an external provider, this document provides the reader with the guidelines on what to look out for and avoid the disappointment of uncovering 'fool's gold'!

Against the prediction of the digital pioneers, the age of the paperless office remains a fantasy. People are printing more than ever before despite the ubiquity of e-mail and electronic information. According to the Office of National Statistics, paper consumption in the UK increased more than 16% between 1994 and 2004 and continues to rise. Yet, the true extent of the rise in office printing costs has remained submerged in a myriad of different budgets and cost codes. When Gartner produced a briefing paper identifying total print costs in a typical organisation to be between 1-3% of their revenue, many senior procurement and operational managers were shocked and printing suddenly became a target for cost control.

Gartner revealed that the spread of responsibility and budgets for office printing (which covers all printed output from copying to printing to faxing) meant few companies had any idea of the total costs. Printers were the responsibility of the IT department, printer cartridges were procured locally and copiers were controlled by the Facilities or Procurement department. Gartner looked at all the costs associated with office printing, from direct costs (hardware, consumables and maintenance) to indirect costs (power, wastage, procurement costs, and helpdesk calls). Their analysis suggested that these costs could be reduced by as much as 30%.

The Gartner report was seized upon by the copier and printer sectors as the justification for companies to adopt the new multi-functional technology they had developed. Within a few years every copier and printer vendor (and several of their resellers) was pedalling

<sup>1</sup> Rightsizing Output Fleets - The Hidden Gold Mine, J.Lundy, Gartner Group, 2001

a print cost review purporting to save between 20-40% of a company's print costs. Each vendor had a different perspective on how to tackle Gartner's 'hidden goldmine' and each one had its own theory on how to best calculate the costs.

In the excitement of discovering a new savings opportunity, several companies started print reviews, usually on the back of advice and reports from copier and printer vendors. Some even started the programme in-house, but all were frustrated by the difficulty in identifying the full costs and being able to compare these against different technologies. Even the hardware vendors were making wild assumptions and estimates that meant the claims of savings were invariably much higher than what was delivered.

One of the most significant myths perpetrated by the print hardware industry is the extent of current costs. The truth is that direct costs typically only represent 0.1 to 0.3% of a company's revenues - not quite the goldmine for savings Gartner had identified! So the first area that any company thinking of starting a print review needs to understand is how print costs should be calculated.

## UNDERSTANDING OFFICE PRINT COSTS

The difficulty for a Procurement or IT Manager is making sense of the many different and often contradictory claims made by the print and copier vendors. The typical sales pitch from a copier vendor starts with the statement that colour ink in inkjet printers is three times more expensive than vintage champagne (true) and is followed by the assertion that the typical Hewlett-Packard printer is three times more expensive to run

than a multi-functional copier (false). The confusion stems from the different approach the copier based companies have taken to the printer based ones in their pricing.

So to help anyone looking to review their print costs and calculate a cost per page, here is a quick overview of the main components of the direct costs.

### Hardware Costs

Hardware costs cover the direct costs of acquiring a device. In the case of printers this will be the purchase price, which if a small desktop will be expensed immediately, or if a larger one it will be depreciated over 3-4 years. Copiers and multi-functional devices are typically bought through a lease arrangement and the machine cost will be supplemented with a finance charge.

When a device is bought through a finance lease, regulations require that the machine cost is clearly displayed. However, the re-emergence of all-inclusive cost per copy schemes has made establishing the purchase price more complicated. The issue here is around separating the hardware cost from the consumable and maintenance costs if everything is bundled into a single cost per page.

Even if the devices are purchased, there are considerable practical issues to calculate a hardware value, something the less sophisticated print reviews gloss over. For example, are there any records of when the printers were purchased? If not, what assumptions will be made? How will printers be treated if they have already been fully depreciated?

In many cases, whoever performs the print review makes an assumption on the economic value of devices, often inflating it to make the current costs appear to be higher than they are. If the print review is being carried out by an equipment provider, it will be in their interest to raise the current costs in order to make the future proposition more attractive.

## Consumable Costs

Consumable costs consist of all the elements required to put ink or toner on paper. Unfortunately, the print and the copier sectors have completely different approaches to this in the UK - copier companies bundle in the toner and maintenance costs into a cost per page fee, while the printer industry supplies toner separately on a cost per cartridge basis. A key point is that printer cartridges contain engine components as well as toner; therefore when a printer cartridge is replaced there is more to the replacement than toner, which explains the greater reliability but also the higher cost.

These two different approaches have made it very difficult for anyone undertaking a review in-house to compare the cost of printers with copiers or multifunctional devices. In order to make a proper comparison between output devices (printers, copiers, fax machines and multifunctional devices) the cartridge costs have to be converted into a cost per page - this requires an understanding of the murky world of toner cartridge page yields. A sophisticated print assessment will have the tools and means to make this calculation or substantiate any assumption made; a poor one will simply assume a low page yield.

The importance of understanding how much toner is printed on each page and therefore how many pages each printer cartridge will cover cannot be over-stated. Consumable costs represent the majority of the cost in a typical output device and inflating this element will have a significant effect on the overall cost calculation. NewField IT regularly comes across print reviews where all mono printing is assumed at "8% toner coverage per page" (which means a lower yield per cartridge) or that the running cost of a Hewlett-Packard colour printer is simply "12 pence per page". These are dangerous assumptions and often occur in a 'free' print review where the provider or in-house person doesn't want to spend the time to do a thorough analysis.

NewField IT has built up a database of paper toner coverage both at an industry level and within a company at the departmental level. One UK investment bank we recently

performed a print review for revealed an average of 5.2% toner coverage for mono printing across the whole site. At the departmental level though the spread between departments was between 2.9% at the lowest and 11.8% at the highest. As a further quality assurance step, NewField IT supplements its electronic toner coverage analysis with sample documents, from which we determine the actual coverage.

## Maintenance Costs

All equipment with moving parts requires some sort of maintenance support. Copiers and multi-functional devices by their nature have more moving parts and therefore higher maintenance requirements. Printers on the other hand tend to be much more reliable and have correspondingly lower maintenance costs.

Again, as with the cost elements above, it is important to understand what assumptions anyone performing a print review has made and how these have been substantiated.

## Summary

With all of the three cost elements (hardware, consumables and maintenance) accurately collected the print review assessor can create an overall cost of ownership. Some providers refer to this cost as the Total Cost of Ownership, but these cost elements are only the direct costs.

The real strategic value in a print review takes into consideration the indirect costs such as the cost of helpdesk calls, IT support and the cost of raising purchase orders for small consumable items. An independent specialist consultancy in this area, All Associates, has collected data that shows indirect costs to be as much as ten times direct costs.

## BREAKING THE CODE - FIVE GUIDELINES FOR STARTING A PRINT REVIEW

Understanding print costs alone is not the answer to reducing them. Printers are probably one of the last bastions of personal privileges and therefore carry an emotional attachment that needs to be dealt with. NewField IT's experience in implementing print review programmes, particularly in large organisations, is that reducing print costs is as much about change management as it is technology management.

We suggest companies follow these five guidelines if they want to achieve the savings that Gartner so enticingly promised.

### 1 Get a bird's eye view

No print review will work unless the position of the devices is known in relation to where the users are sitting and the layout of the office around them. Output devices need to be mapped to a floor plan so issues around secure areas and office walls can be catered for. This is also important later on when deciding what devices to retain and what new technology to introduce.

Some of the problems NewField IT has encountered where a floor plan view has not been professionally completed, include:

- a manufacturing site where the intended placement of a shared device in a secure area that most of the users couldn't get access to;
- the removal of devices in a bank that print pages from a specialist application that didn't work through a multi-functional device;

- the implementation of a cost savings programme in an insurance firm which was too aggressive and hindered user productivity in critical areas

### 2 Beware of guerilla economics

Building a business case for print savings requires a means of modelling the current costs - like any statistical or economic model the assumptions need to be clearly stated and any limitations of those assumptions explained.

The danger of in-house print reviews or those performed by someone with an equipment sale in mind is that they hijack the fundamental basics of good modelling by hiding the assumptions. The implication of hiding a wrong assumption on calculating toner costs could be to inflate costs by more than 30%.

The answer is to make sure that anyone who provides a print review states all their assumptions openly and supports the figures with evidence.

### 3 Prints not printers

The objective of the average user is to be able to print their documents quickly and for the output to be the same as what they see on their screen. The objective of the print and copier industry on the other hand is to promote the device itself, the number of trays, the options from the touch panel, the speed of the print engine, etc. Therefore a print review that results in a list of models and a wide array of optional accessories is not going to meet with much excitement from the users.

The answer is that the print review should deliver a catalogue of technology, split according to user requirements: mono versus colour, low volume versus high volume, single function versus multi-function, etc. Each category should then have a list of the accessories required to meet the user requirements and a guideline on the volume that is expected to go through that device (device utilisation is a key metric for future print management). A final and essential part of the catalogue should be the device management software and how this will manage and monitor the new print infrastructure.

This approach of 'needs' rather than 'speeds' allows for a much more effective tender of equipment.

#### 4 The higher savings the greater the change

Few companies realise that the riches of high savings promised by Gartner's 'hidden gold mine' report are directly proportional to the degree of change the company has to undertake. An easy way to benchmark the amount of change is to look at the user to device ratio.

NewField IT's analysis of more than 50,000 users found that the average user to device ratio is 2.7 to 1, prior to a print review. A low level of change would see a company move to an average of 6:1, while a high level of change would be in the region of 12:1. The temptation is to get too excited about the savings and forget the impact on both the users and the organisation as a whole to achieve such a high degree of change.

We came across a large manufacturer where a vendor's spreadsheet approach had sold the organisation on a print review. The savings were predicted at over 30% on the basis of a 12:1 ratio. What the vendor had failed to appreciate

was that in this manufacturing environment users were dispersed across wide areas and sharing devices across buildings was simply not feasible. The final implementation was 6:1 and costs were much higher than had been originally projected.

#### 5 Optimisation not rationalisation

Many of the copier and printer companies offering print reviews refer to a 'reduction' or 'rationalisation' of devices as the driver to achieving savings. This approach fails to balance user productivity with cost savings. NewField IT's approach is to run a print review as an 'optimisation' programme that looks at the efficiency and effectiveness of the new solution as much as the costs.

When looking at print costs there are many different issues to tackle. To achieve the highest savings, a Procurement or IT manager needs to take a simple approach that separates short term wins from longer term ones and matches a business case to the work proposed. Several times we have seen a company-wide roll-out that tried to achieve too much too soon with the result that the users objected and the programme failed to deliver any savings.

## CONCLUSION - FINDING THE GOLD

Gartner's Rightsizing Output Fleets Report identified print as an area of high costs and low co-ordination. These costs can be reduced, producing savings of as much as 30%, but whether such a print review is done in-house or through an external provider the process must be thorough.

Gathering all the right data and modelling the costs so that a like for like cost comparison can be achieved requires a great deal of skill and expertise. We have pointed out in this paper the pitfalls of trying to do a print review without a proper understanding of what is involved. By deconstructing some of the myths behind a print review we hope the reader will feel better equipped to begin a quest for Gartner's savings gold mine!

## NewField IT

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