

CASE STUDY

Outstanding Cost & Energy Savings with IBM FlashSystem

Cost-neutral replacement of legacy storage systems, resulting in staggering performance improvements.

Version 9.0 | December 2024



Customer:

A global manufacturing and retail FMCG brand.

Industries:

Retail, Printing and Manufacturing of creative tools and products, real-estate and media-streaming services.

Operations:

International presence across 100+ countries.

IT operations with a central data centre based in the UK and regional business centres around the world.

Introduction:

This customer is a global FMCG giant with centralised operations in the UK that are crucial to their worldwide operations.

The nature of the customers' business means they place a firm emphasis on sustainability across their global operations. Their efforts include sourcing paper sustainably, reducing energy and waste, and implementing renewable energy sources. In 2021, the customer reduced CO2 emissions by an impressive 130k metric tons throughout their business. They focus on reducing greenhouse gas emissions, water consumption, and landfill waste.

"We are a mature business with manufacturing and distribution worldwide. Our IT infrastructure is vitally important to us, which is why we only invest in IBM technologies and infrastructure."

Customer Head of Infrastructure and Data Centre

The Challenge:

In 2023, the customer was facing a cost challenge relating to their legacy data storage systems in their UK operations centre.

High Maintenance Costs:

The customer's existing IBM V7000 Gen2 storage arrays incurred high annual maintenance costs, which the incumbent supplier continued to defend. It was only when Covenco were introduced to the environment that these costs were put under the spotlight.

Power Consumption:

The servers and storage systems consumed a massive 58,916 kWh per year (assuming PUE of 1.58), leading to significant cooling requirements at associated costs.

This customer is highly attuned to meeting its green credentials and is under obligation to do all it can to reduce its CO2 footprint. The power consumption and associated CO2 footprint within the data centre was becoming a significant concern for the business.

Sprawling Footprint

The storage arrays at the customer's data centre took up 32U of rack space, a significantly large area within any business data centre.

The customer asked the Covenco IBM Power & Storage team to help tackle these issues.



The implementation of new IBM FlashSystem 5200 saved our customer significant costs while improving performance and reducing the companies overall carbon footprint.



Covenco's Approach:

Covenco, an IBM Power and Storage Gold Business Partner, provided the customer with a proactive solution to address their data storage challenges. They initiated a comprehensive diagnostic of the data estate, focusing on storage, data access requirements, alongside power and cooling needs.

The Covenco team were surprised to find that the customer was paying a very high cost for the maintenance of a large estate of older IBM V7000 storage arrays. While these systems were perfectly serviceable, they took up a large proportion of the customers data centre, consumed 4,351 watts per hour of electricity - and the annual maintenance cost was significantly more than the average IT Director's salary.

The Covenco team immediately recommended the replacement of the old V7000 hardware with two new IBM FlashSystem 5200 arrays. These arrays would come with three years of manufacturers warranty, followed by an annual plan costing less than 20% of the current contract.

The client chose to go ahead with the recommendations from Covenco, including planning, implementation, hardware provision and migration.

“Presenting these figures to the customer was exciting. It was a complete package that paid for itself within 18 months, and the maintenance costs after the third year were 80% cheaper. The entire project also had a direct and positive impact on power and cooling consumption.

Not only did this have a huge impact on energy costs, but it also meant the customer could reduce their CO2 emissions by 99 Gross Tons of CO2 over four years - equivalent to planting 1,150 trees.”

Bob Naismith
IBM Power and Storage Consultant, Covenco.



Results Achieved:

The implementation of the new storage solution delivered impressive results:

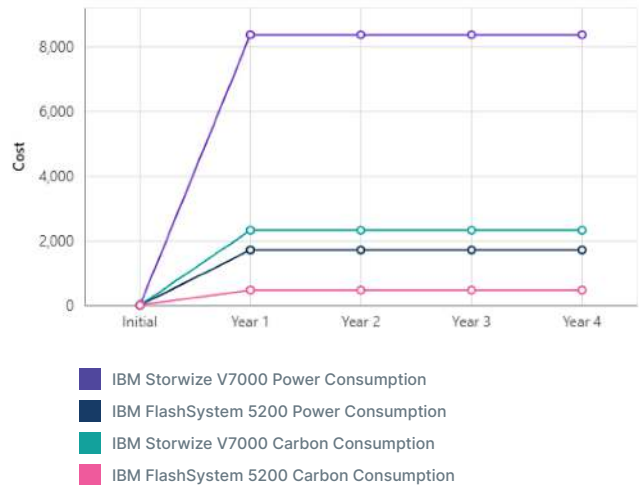
Cost Savings:
After 18 months, the new storage arrays will be cost-neutral (including capital investment, installation and maintenance). In addition, the maintenance after year three will be less than 20% of the legacy systems.

Significant Power Savings:
Power consumption was reduced from an average of 4,351 watts per hour to 886 watts per hour, resulting in a staggering savings of 189,400 kWh over four years.

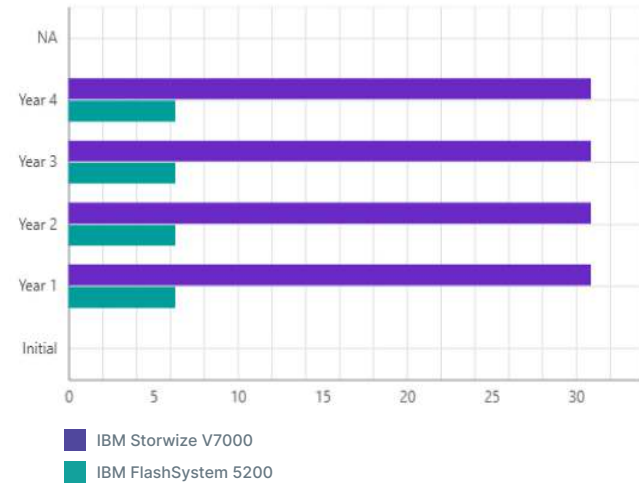
Environmental Impact:
The upgrade reduced CO2 emissions by a gross 99GT CO2, equivalent to environmental savings from planting 1,150 trees.

Dramatic Space Reduction:
The storage form factor was reduced from 32U to just 2U, saving an impressive 30 rack units.

Power and Carbon Costs Over Time



Carbon GT Co2 Over Time



Performance Improvements:

Thanks to the new IBM FlashSystem 5200 arrays, the customer experienced remarkable performance improvements:

IOPS (Input/Output Operations Per Second):

Increased from 22,046 to a staggering 797,710.





Latency:

Reduced from 2ms to an impressively low 0.1 ms, significantly enhancing data access and system responsiveness.

| | Business as Usual | New Environment |
|---------|-------------------|-----------------|
| IOPS | 39,715 | 1,687,062 |
| Latency | 2 ms | 0.1 ms |

Significant resource and space savings:

The newer storage arrays saved a large amount of data centre footprint, including:

| | | |
|---|---------------------|-------------------------------|
|  | 323 Drives | REDUCTION IN NUMBER OF DRIVES |
|  | 30 Rack Units saved | FACILITY SAVINGS |
|  | 91.6 Sq ft | FLOOR SPACE SAVINGS |
|  | 189,400 kWh | POWER SAVINGS |
|  | 99 GT CO2 | GROSS CARBON TONS SAVED |
|  | 1150 trees | ENVIRONMENTAL SAVINGS |

Key assumptions used throughout this case study:

| | |
|----------------------|----------|
| Usable storage: | 110.0 TB |
| Growth rate: | 0% |
| Cost of electricity: | \$0.21 |
| Cost of carbon: | \$75 |
| PUE Factor: | 1.58 |

NOTE:

The charts and figures used in this case study were updated by IBM, 04/12/2024.
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IT Asset Disposition (ITAD) Considerations:

In addition to the supply and implementation of new storage hardware, Covenco provided a holistic solution by re-purposing the customer’s legacy V7000 storage arrays, mitigating the cost of the new FlashSystem 5200 units.

Covenco additionally sanitised the old hard disks, ensuring that all data on the drives was erased to international ITAD standards.

“We are delighted to be able to recycle our old hardware and re-sell our hard disks.

The IT industry is moving away from the destruction of millions of hard disks thanks to professional data sanitisation methods such as those employed by Covenco.”

The Customer’s Head of Infrastructure and Data Centre

Conclusion

Covenco’s solution not only helped this customer optimise their IT infrastructure for cost savings and sustainability but also substantially improved their system performance.

This case study demonstrates how strategic IT upgrades can result in significant operational improvements for a business while contributing to a greener future.

The customer has expressed delight with these substantial savings and performance improvements – as well as the resulting environmental impact reduction.

“From the outset, it was clear to my team that this customer could save a huge amount in ongoing maintenance – but also reduce their power and cooling costs at the same time.

The CO2 savings have been an astonishing benefit, and the performance step change has revolutionised the clients data management capability”.

Bob Naismith, IBM Power and Storage consultant, Covenco.

About Covenco

Covenco connects data management services with IT hardware supply and support. With over 35 years of experience in the IT industry, our team offers a reliable source of expertise for data centre administrators.

Covenco supports businesses with world-class data protection, backup, and disaster recovery services.

Our UK data centres have over two Petabytes of customer data under management at any time, and we are fully ISO27001 accredited for data security.

Contact Covenco

Covenco UK Ltd Head Office
Unit 4, MXL Centre, Lombard Way,
Banbury, Oxfordshire. OX16 4TJ
United Kingdom

Telephone: 01753 732000
Email: enquiries@covenco.com

<https://covenco.com>

