

# CITY UNIVERSITY OF HONG KONG

EMC helps university reduce its carbon footprint through integrated, innovative technologies



## ESSENTIALS

### Industry

Education

### Company Size

992 employees /more than 19,000 students

### Business Challenges

- Increased volume of paper-based records created a burden for HR and Finance staff
- Storage systems were running at close to full capacity
- Storage was taking up considerable floor space and power supply

### Solutions

- EMC VMAX 10K
- EMC FAST VP
- EMC VPLEX Metro
- EMC Data Domain
- EMC Avamar
- EMC RecoverPoint
- EMC Documentum Platform and Platform extensions
- VMware
- Oracle Database
- Microsoft SQL Server and Microsoft Exchange Server

CUSTOMER PROFILE

## OVERVIEW

Founded in 1984 from humble beginnings, City University of Hong Kong (CityU) has grown to become one of Asia's highest ranked universities. The university now offers more than 130 bachelor degree programs to over 19,000 students within seven schools and colleges.

As one of eight public universities in Hong Kong, the university is committed to nurturing and developing students' talents, while delivering high-quality IT services to its students and staff through efficient and sustainable technologies.

## BUSINESS CHALLENGES

Mindful of balancing growth with social responsibility and sustainability, CityU had embarked on a Paperless Office Project. Launched in 2011 as part of a wider 'Green IT' plan, the aim of the initiative was to reduce paper records, power, and space consumption while also improving administrative efficiency and information security.

In addition, the university's wider IT infrastructure was coming to the end of its support contract with storage systems running at close to full capacity. The storage infrastructure had been taking up considerable floor space and substantial power supply. As a result, the CityU team decided to investigate possible upgrades to the infrastructure.

Dr. Andy Chun, Chief Information Officer at CityU, comments, "The University has recently experienced the curriculum changing from three to four years. This has increased the number of students accessing our IT infrastructure. We wanted to ensure our IT infrastructure would be capable of supporting an increased user base and increased number of applications, and most importantly deliver high availability to our users."

## SOLUTIONS

Having investigated the potential options available, CityU ran a Proof of Concept (PoC) at the EMC Solutions Center in Hong Kong. Dr. Chun says, "We are a long-term customer of EMC. The results of the PoC validated our existing belief in EMC technologies—it was an easy decision for us."

Working with the EMC Global Services team, CityU upgraded its existing storage environment to the EMC® VMAX® 10K enterprise storage with EMC FAST™ VP. The University utilizes by EMC VPLEX® Metro and EMC RecoverPoint® remote replication to protect mission-critical applications. Simultaneously the University upgraded its backup and recovery environment to the latest version of EMC Data Domain® deduplication storage system supported by EMC Avamar® data deduplication and backup.

Dr. Chun says, "With our Green IT strategy in mind, a key goal was to reduce our carbon footprint through innovative, efficient technologies. Beyond that we wanted to enhance our level of service to users."

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## Results

- Reduced costs by \$500K per year with implementation of paperless records
- Reduced energy costs and CO2 emissions by 64 percent
- Provided uninterrupted learning with active-active data center
- Enabled simpler, more efficient management of storage infrastructure
- Reduced backup times by approximately 72 percent

## DELIVERING COST SAVINGS OF \$500K PER YEAR

The University's Human Resources and Finance departments had been facing a growing shortage of physical space in which to store hard copy documents. The departments had also wanted to optimize workflows and streamline service delivery.

Since 2011, CityU has digitized more than one million documents using EMC Documentum® software, delivering significant cost savings to the University.

Dr. Chun says, "Our 'Paperless' project launched in 2011 with of budget of \$1.4M. Initial cost savings for the HR and Finance departments alone were \$500,000 a year. So we have recovered our costs in less than three years."

Professor Arthur Ellis, City University Provost adds: "The University paperless office project aligns with our campus strategic plan. It leverages advanced technology to save time, money, space, and natural resources."

## REDUCING ENERGY COSTS AND CO2 EMISSIONS BY 64 PERCENT

By upgrading the university's storage environment to the VMAX 10K, CityU has not only reduced its storage utilization from 98 percent to 74 percent but it has also dramatically reduced its energy bills through the elimination of 50 percent of its rack space in its data center.

"Our Green IT strategy is very important to us. EMC has helped us reduce our CO2 emissions by approximately 64 percent, which is a fantastic achievement considering our storage requirements continue to grow year on year."

Dr. Andy Chun  
CIO at City University of Hong Kong (CityU)

Dr. Chun says, "Previously our storage environment took up four racks within our data center. Using VMAX 10K with FAST VP, we have reduced that to just two racks. This has improved our application response times and has delivered an estimated energy cost savings of around 64 percent to the University."

Beyond the cost saving, CityU has also seen its CO2 emissions drop significantly, supporting the organization's wider Green IT goals. Dr. Chun comments, "Our Green IT strategy is very important to us. The VMAX 10K has helped us reduce our CO2 emissions by approximately 64 percent, which is a fantastic achievement considering our storage requirements continue to grow year on year."

## PROVIDING UNINTERRUPTED LEARNING

CityU is now positioned to deal with disaster recovery more efficiently and effectively than ever before. In the event of a disaster, CityU previously would have needed to restore its data from tape backups, which could take the IT team anywhere between four to eight hours to complete. Thanks to the introduction of the VPLEX Metro environment supported by EMC RecoverPoint, CityU now has an active-active data center. This means that applications will keep running regardless of failure within the array without manual intervention, thus guaranteeing continuous operations for the University.

Dr. Chun says, "In the event of a disaster, the system will automatically shift to our backup array ensuring our students do not experience any downtime. This is critical for an educational organization."

## **SIMPLER, MORE EFFICIENT STORAGE MANAGEMENT**

CityU is benefiting from improved management capabilities provided by EMC Unisphere® software. Chun believes that using the automated software, the IT team is up to 24 times more efficient than the university's previous systems. This increased efficiency enables Chun and team to reallocate resources to other strategic project work.

Dr. Chun comments, "Generally, an enterprise storage environment would be seen as a very complex environment to manage. But with the VMAX 10K, management is very simple."

## **REDUCING BACKUP TIMES BY APPROXIMATELY 72 PERCENT**

Beyond the storage upgrades, the University's upgrade of its backup and recovery environment has also delivered significant results.

Dr. Chun says, "Through the combination of the latest Data Domain and Avamar technologies, we have seen a reduction in our data backup times from 14 hours to four hours. Again, these efficiency improvements enable us to reallocate our resources to other important projects."

## **LONG-TERM PARTNERSHIP KEY TO UNIVERSITY SUCCESS**

CityU believes that its close relationship with EMC plays a key role in the University's success.

Dr. Chun says, "We are very confident in our IT environment. The reliable backend infrastructure enables our staff to concentrate on delivering high-quality education services to our students."

He concludes, "EMC provides us with an end-to-end solution and delivers industry-leading technologies that are supported by a highly skilled and committed services team."

## **CONTACT US**

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, [contact](#) your local representative or authorized reseller—or visit us at [www.EMC.com](http://www.EMC.com).

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