

The FIT (Facilities and IT) Datacentre

Balancing the needs of FM and IT for a comms room 'eco-structure'

By Nick Ewing, Senior Solutions Consultant, Comtec Power

Sometimes departments within an organisation see themselves as distinct, or worse, expect other departments to exist merely in a support capacity to their own efforts.

The truth is that these departmental boundaries do not have a place in today's organisational structure; external business drivers such as legislation and increased competition demand a more integrated approach to fulfilment of company objectives.

This organisational utopia can balance all the individual departmental needs for harmonious working practices, but achieving it requires a collaborative approach.

IT and FM – 'Yin and Yang' or 'Chalk and Cheese'?

Classically, this departmental rift has existed between the facilities and IT function, and it is particularly evident when it comes to the datacentre. The datacentre is rather anomalous in that it is both the foundation of the IT estate, the network critical physical infrastructure of the business, and requires close consultation with facilities management (FM) in design, specification and management. As such, balancing the needs of IT and FM is imperative to ensuring the continued operational efficiency of the datacentre.

Organisations that have the opportunity to implement a datacentre as part of a Greenfield project have the advantage of being able to work from a blank-canvas, designing a datacentre that is optimised for ease of maintenance. However, there are numerous factors that justify a refresh of the existing datacentre, which can ensure efficient operation into the future. In these instances it is critical that the network and application resilience required by the IT department is balanced with the available space and the power and environmental maintenance obligations of the facilities department.

Mutual Goals

Both IT and FM departments are responsible for improving the effectiveness of an organisation's primary activities, for example, business development and market expansion in the case of the private sector. Therefore, the wider business drivers affecting the organisation must remain at the forefront throughout the datacentre planning process.

Some of these drivers are beyond the reasonable control of the organisation; others are the result of internal restructuring and development. They all translate as direct implications to the datacentre:

Compliance with environmental legislation

Gartner analyst Rakesh Kumar, in his report “Why ‘Going Green’ Will Become Essential for Data Centres”, considers datacentre environmental legislation as inevitable. He highlights the scrutiny that the datacentre is likely to incur as a notoriously power-hungry element of the IT infrastructure.

Spiralling energy costs

The fluctuating cost of energy is an overhead that management will want to see reigned in and demonstrably reduced to support the pursuit of healthier profit margins. With some reports indicating that a large datacentre consumes as much energy as a small town, this is an issue that will not go away.

Corporate social responsibility (CSR)

Far from being the latest and greatest marketing buzzword, CSR is now a strategic consideration for an increasing number of firms. Predominantly a reactive endeavour, as a response to the omnipresent ‘green’ issue, firms are keen to flex their eco-friendly muscles and a datacentre refresh could significantly reduce the carbon footprint.

Storage capacity

With the burgeoning amount of data created and stored by organisations, capacity requirements demand ever-more storage hardware to be installed into datacentre racks – but once these are full the only long-term solution available is to build a new or additional datacentre.

Growth

This symbolises that the primary objectives of a business are being met, but it also means that, if expansion into new premises is necessary, there will be a torrent of requirements that facilities must fulfil.

A Problem Shared...

...is a problem eliminated. When tackling any datacentre project, facilities and IT departments have a number of methods available to expedite a successful implementation. Through communicating and understanding each other’s obstacles and needs it is possible to identify areas where compromise or additional support will facilitate the design, installation and maintenance of the datacentre.

Tackling datacentre development, particularly if it is not a familiar task, could be akin to carrying out a hefty plumbing project with rudimentary DIY skills. Good in the short term, maybe not so good in the long term.

So before you take on this task, look for established vendors of datacentre racking, UPS (Uninterruptible Power Supplies), and cooling systems. These companies spend time and money on continuous research and development and are sure to still be around when you need additional components.

Designing a datacentre is an art in itself, but installing a datacentre, ensuring that it is operational and up and running in time to support business operations, can be a difficult task. Speak to your datacentre equipment vendor, they can offer guidance on how to maximise your datacentre investment, and recommend third-party expertise, so that the design and implementation will provide the longevity required to address the current and future drivers of infrastructure investment.

Case Study

Royal Caribbean International, a leading cruise company, is a good example of the affect the aforementioned drivers have, and points to an orchestrated effort between IT and FM.

The Challenge

In order to support an expanding workforce and long-term growth strategy, Royal Caribbean needed to invest in a new, centralised EMEA head office. Importantly, the UK site would act as the central hub for six other sales offices located across the EMEA region, and from where the organisations' IT services – voice and data - would be hosted.

A new datacentre to support the company's 600 employees, and which would consolidate the company's existing IT facilities, became a priority for the relocation.

The decision to have the datacentre on-site at Royal Caribbean's UK head office meant that facilities management were limited to a fixed physical space within which to house the EMEA region's IT estate. Energy efficiency was also of paramount importance to the facilities department who were keen to align new investments with the company's CSR strategy.

For the IT department, this was an opportunity to build a datacentre that would right-size the existing business need as the company grows, and be efficient to manage and operate.

In addition to these challenges, Royal Caribbean's peak sales period was fast approaching. The datacentre had to be operational ahead of time to guarantee the availability of in-bound call centre facilities and e-commerce applications.

The Solution

Following in-depth consultancy to scope out the specific parameters of the project, Comtec Power was selected to execute the datacentre design and build for Royal Caribbean. Holding

the highest levels of partner accreditation with leading vendors of datacentre technology, Comtec Power could amalgamate an impressive portfolio of products and skills to deliver the most appropriate, robust solution for Royal Caribbean.

Furthermore, Comtec's experience in working with both facilities and project management meant it could meet the needs of IT and FM, and were able to set about balancing the critical uptime and scalability requirements of the IT department with the long-term demands of the business.

Using its 'eco-structure' blueprint, Comtec Power designed and installed a datacentre using technology from the innovative APC MGE InfrastruXure® range. By using the APC product suite, Royal Caribbean's datacentre will benefit from being 'right-sized', meaning it uses only the power and cooling that is needed today, which helps manage the operational efficiency - and expenditure - of the datacentre.

Furthermore, the scalability afforded by APC's technology and the Comtec design is especially critical since the UK-based head office is also responsible for the integration of new offices as and when the need arises.

The Results

James Mead, IT Project Manager EMEA at Royal Caribbean oversaw the implementation by Comtec Power:

"All six of our EMEA sales offices are reliant on the UK based datacentre, which means continuity and failover is crucial to maintaining 24/7/365 business operation. The robust solution delivered by Comtec has already proven itself as being fully capable of supporting our business. We've experienced a number of power cuts since the installation; however, the new datacentre has insured us against zero downtime of operations."

For Mead, the real test was meeting a deadline that was immovable. "Royal Caribbean enjoys its highest volume of sales between January and March, so timely installation and support from Comtec proved a critical success factor. Needless to say, we achieved this deadline, and were able to ensure that our inbound call centre operations were running in time to enable us to gain maximum benefit from this important sales period."

Mead concludes, "Throughout the entire process, Comtec Power worked relentlessly to provide the support and consultative skills we required to build the IT foundations for our company."

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Key datacentre considerations spanning FM and IT

- Right-sizing – making sure that power and cooling complements what the business needs today to eliminate wastage, reduce the carbon footprint and energy bill
- Scalability – scope to grow with the business, not ahead of it, preventing unnecessary investment and taking out the guesswork – does not necessarily require surplus physical floorspace
- Balancing power and cooling – systems should be concentrated on cooling components, not empty space
- Modular design – facilitates targeted cooling, scalability, and helps to ensure that the physical space is used to maximum advantage.