# Data Centre and Virtualisation

# Analysing the Struggles and Successes of DCIM

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**Biography**

Darren began his career as a graduate Military Officer in the RAF before moving into the commercial sector. He brings over 20 years experience in telecommunications and managed services gained at BT, MFS Worldcom, Level3 Communications, Attenda and COLT. He joined the VIRTUS (https://virtusdatacentres.com) team from euNetworks where he was Head of Sales for the UK, leading market changing deals with a number of large financial institutions and media agencies, and growing the company's expertise in low latency trading.

Additionally, he sits on the board of one of the industry's most innovative Mobile Media Advertising companies, Odyssey Mobile Interaction, and is interested in all new developments in this sector. Darren has an honours degree in Electronic and Electrical Engineering from University of Wales, College Swansea.

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## Abstract

*Data Centre Infrastructure Management (DCIM) is the strategic business management solution for the data centre. It's value is in its capability to manage change workflows for the business of IT at the physical infrastructure level and software level within the data centre. As IT management looks for its own purpose-built enterprise-class business management suite for the entire data centre, the author of this article discusses what the IT industry can do to ensure businesses are benefiting from the rich analytics that DCIM offers?*

## Introduction

It is no secret that the driving force behind Data Centre Infrastructure Management (DCIM) is the need for complete visibility into a data centre in order to better manage costs and capacity. An ideal DCIM strategy should enable the centralised monitoring, management and intelligent capacity planning of critical systems – helping data centre managers address difficult challenges, including escalating energy costs, tight budgets, dwindling network capacity, limited floor space, and pressure for more uptime. Leveraging DCIM, companies can find new ways to maximise data centre ROI and achieve much greater levels of efficiency.

So, if DCIM brings a multitude of benefits, why is it not yet used by everyone?  Why has it simply not reached its potential?  What can the industry do to ensure businesses are benefiting from the rich analytics that DCIM offers?

## What's the issue?

There is been a tendency to be downbeat about the subject.  Some naysayers, who believe that DCIM is failing, suggest the fault lies partly with the industry for over-hyping the tech's potential and partly with customers for not really understanding the exact challenges they were seeking to solve with data centre management software.

Although it's a fairly straightforward technology, there is a fundamental awareness problem amongst IT departments.  If customers don't know what the software is and how it can save on their power usage and overall costs, there is a risk it will be overlooked and under-utilised, as is evident at the moment.

Even if the benefits of DCIM are known, barriers to adoption still remain.  This is particularly true for older generation data centres, not originally designed for DCIM, which struggle to install it.

The ability to flex power and usage requirements up and down come into direct conflict with many commercial data centre models, which rely on long term, costly and inflexible contracts to safeguard their operations.  This means that having DCIM under these conditions becomes ineffective unless customers have the power to amend their contracted usage commitments to reflect actual real-time usage.

Issues over cost are further complicated by the fact that DCIM spans both IT and Facilities – two areas which don't normally overlap.  This has been known to create disagreements, for example, over whose budget should be used to pay for DCIM, with neither side stepping up to take responsibility.

## So, what's the answer?

There are two issues for the industry to solve here.  The first is a fundamental one – understanding what DCIM is (not a single piece of software but a software category consisting of two core building blocks: DCIM monitoring, and IT Asset Management (ITAM)) and determining, as a business how to implement, and who takes responsibility for the tools.  For many, a successful DCIM strategy involves three key stages:

1.  **Strategic:** Developing a robust business case for investment in DCIM

2.  **Tactical:** Scope and specify a DCIM system and select the solution that has the best match to your requirements

3.  **Operational:** The process of assessing your existing data centre, rack-by-rack and shelf-by-shelf to populate a DCIM with accurate data.

This is a logical approach, and will pay dividends for companies who will then be able to reap the rewards of DCIM.

The second hurdle to overcome is more complex and requires the IT industry to communicate better with its customers.  We need to ensure businesses fully understanding the benefits of the technology, and why it's imperative to their data centre strategy.

DCIM software monitors all the critical systems in a data centre in real-time so users know how to optimise the use of space, power, cooling, and network capacity. What's more, DCIM monitoring generates an alarm when something is headed for disaster before the catastrophe happens so changes can be made to reverse the risk.

Whilst it is important for data centre operators to gain access to what's happening in their facility in real-time, DCIM can also help with future planning.  When data centre managers know what equipment they currently have, how much power it's drawing and where that power is coming from, amongst other vital information, they will be able to determine how much more equipment their facility can handle.  By optimising capacity, they can delay, or altogether eliminate, the need for constructing a new facility.

## The collaboration story

So, DCIM is important.  But its benefits don't just apply to one organisation, but for entire industries.

In a digital economy, we know that businesses are increasingly relying on their data centres – and so, the space, power and cooling demands placed on them have also increased exponentially.  To tackle this global problem, data centre providers and customers need to collaborate and examine how they can work together to increase efficiencies – reducing spiralling energy consumption and cost.

DCIM is an important way of facilitating this collaboration.  Traditionally, data centre providers have been quick to highlight if customers need to buy more capacity, but not as quick to advise when to scale down requirements.  DCIM creates this visibility and puts the control firmly back into the power of the customer – giving them greater visibility into their daily usage and allowing them to manage their capacity in real-time and act on the analytics.

Of course, this is only useful if they have the flexibility to scale down their contracts in the event that they are not using the initially agreed amounts.  Several innovative providers are already offering this capability and actually using DCIM to create new commercial models, which makes choosing the right intelligent data centre provider more critical than ever.

## What's in it for providers?

If these hurdles are overcome, we believe that DCIM will cement its place as an essential part of the intelligent data centre.  With more customers come more

demands and they will expect their providers to offer the most advanced solutions available.

The benefits for providers are also clear.  Supplying visibility also creates value to providers – it creates trust and strengthens the customer relationship.  Rather than this perceived fear that DCIM reduces the control of operators, it is simply a realigning of focus – giving the customer access to what is rightfully theirs.  It's their data, their power consumption, why shouldn't they be allowed to both monitor and control it?

Through the use of DCIM, operators will be able to ensure that they only use the amount of power absolutely required by their customers, and the customer will be able to scrutinise this usage.  In order to fully benefit from the use of DCIM, data centre providers will need to allow their customers to act on the results and scale their usage up or down accordingly.

## In conclusion

Whilst we believe that there are still hurdles to adoption, the future is bright for DCIM.  Put simply, if you do not measure, you cannot manage.

DCIM software has the potential to reduce energy consumption and reduce the management overhead associated with planning the deployment of new IT systems within existing data centres.  It provides a more granular approach to data centre energy management and potentially unites the IT and Facilities view.  It offers benefits to providers too, strengthening customer relationships exponentially.  In essence, it's a vitally important we overcome DCIM issues in order for the entire industry to benefit.