



The Evolution of the Data Center Value Equation

Industry Insight Brief #1

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Welcome to the new era of the modern data center where the value equation has evolved exponentially as enterprise businesses are striving to keep up by shifting from an owner-occupied model to one that includes a range of managed services via a hybrid approach that balances a multi-cloud ecosystem with on-prem or hosted colocation services. To understand the trends happening today, this industry insight brief takes a closer look at how and why the data center value equation has evolved and how shifting to the new value equation is a recipe for success.

The Pre-2000 Value Equation

Over the past decade, the digital economy has been increasingly driven by data. According to Gartner, 2012 was the first time the amount of digital data in the world first exceeded a zettabyte; that's a trillion gigabytes of information. In 2020, IDC reported that more than 59 zettabytes (ZB) of data was created, captured, copied, and consumed. That number is forecasted to jump to 175 ZB globally by 2025 as new digital services are deployed, more connected devices come online, and business further relies on data centers.

While leading companies today are using data to differentiate themselves in a digital market, it wasn't always like this. The early data centers of the 1940s were typified by large, complex computers built to perform calculations. With the first commercial microprocessor (released by Intel in 1971) came the adoption of PC operating systems that ultimately gave rise to the client-server model that facilitated the sharing of unique resources between multiple services, applications, and users. The biggest boom came from 1997-2000 during the dot-com bubble when organizations began to establish a presence on the internet and demand faster speed, lower latency, and more compute power. Prior to 2000, the data center was considered a simple business function—essentially viewed as just a tool and cost center. The data center value equation at that time could have been summarized as:

Data Center Value = (Business Efficiency + Workforce Effectiveness + Market Outcome)

This equation led to a linear and mechanical approach to managing, deploying, and operating data centers where systems were seen as necessary, but not necessarily critical. While outages were still problematic, they were nowhere near as serious as they are today—some companies, to an extent, were able to continue functioning even if their data center was down or partially incapacitated.





The New Value Equation

Fast forward to today and recent reports indicate that digital transformation spending will encompass more than 53% of all information and communications technology (ICT) investment by 2023, up from 36% today—all of which is driving data center growth and placing huge demands on digital infrastructure. In a 2020 State of Infrastructure report from Interop, 41% of survey respondents indicated that at least 30% of their IT budget would be spent on the data center, with one in five indicating that data center spend would surpass 40% of their budget.

It's not a huge surprise that 2020 saw a massively renewed focus on the data center with the pandemic as remote users and business operations fueled an unprecedented increase in network traffic. In the latest AFCOM State of the Data Center report, 70% of respondents reported increased network traffic within their infrastructures since the pandemic hit, with 36% reporting an increase of more than 40%. With both data center and business leaders agreeing that their infrastructure is far more critical than their perception of it just a few years ago, the new data center value equation looks more like:

Data Center Value = (Business Efficiency + Workforce Productivity) x Digital Innovation

The new variable here is Digital Innovation. Beyond terminology, innovation in digital infrastructure and data center spaces directly translates to surviving market and industry fluctuations, much like we saw in 2020 with the pandemic. Organizations that adopted this new value equation approach were prepared with innovative strategies that supported remote users and remote business operations far more effectively. They were able to adapt quickly to survive.

Already Adopted by Some

Throughout the pandemic, businesses from all verticals looked to technology to impact their sales and workforce strategies, and we were able to quickly see which organizations were able to adapt and which ones struggled. Organizations that had adopted the new data center value equation and had already invested in better infrastructure, automation, connectivity, and improved overall management saw the most significant gains.

DICK'S Sporting Goods is a great example. Consolidated same-store sales for their first quarter of 2020 (ending in May) decreased 29%, driven by the temporary store closures that started on March 18. However, e-commerce sales shot up 110% compared to the first quarter of 2019.



DICK'S is an example of a brick-and-mortar organization leveraging technology to gain positive market outcomes during extraordinary times. It's the main reason why 'Market Outcome' is not part of the new Data Center Value Equation. Investing in Digital Innovation and then coupling that with Business Efficiency and Workforce Productivity results in positive gains in the market.

Another example is how a global hyperscale data center deployed an API-driven Service

Delivery Platform (SDP) that empowers customers to interact with their data, services, and connectivity ecosystem. The platform accomplishes this by providing real-time visibility, access, and dynamic control critical metrics across hybrid IT environments from a single platform and mobile device. This enables customers to benefit from new business innovations and operational savings vital to their IT investment.

“ Stores, e-commerce, and technology teams quickly helped us pivot our business and ensure that we were able to provide our athletes with a safe and convenient way to pick up their orders while reducing shipping and packaging expenses. This is a great reflection of our culture and our nimble operating model, and a huge credit goes out to those teams. ”

- Lauren Hobart
CEO of DICK'S Sporting Goods



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