



## Expert series

### MARGIN AND PRICING POWER: AN UNSEEN REASON MICROSOFT AND AMAZON ARE MOVING THE CLOUD TO SPACE

Theory of Constraints guides us to find and mitigate the next bottleneck while the remainder of the system is improved. For years, even the most sophisticated players in cloud have been held back by a key myth: that the cloud is global and limitless, or could be made to be global and limitless with investment quickly and easily. In the past, this common misconception has prevented enterprises from seizing opportunities, finding bottlenecks, and managing risk to their cloud capacity. But with companies leveraging Low Earth Orbit broadband-capable satellites including Amazon's Project Kuiper, Microsoft's Azure Space, Viasat, Intelsat, SES, and SpaceX's Starlink in particular to push cloud into space, this myth creates a dangerous blind spot, one that hides an emerging threat to competing cloud or data center providers who are behind the curve on space initiatives.

## About the Authors

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## When a data center approaches capacity, allocating capacity to latency-independent workloads translates into an opportunity for your competitors to squeeze your margins and apply downward price pressure

Many forget that the cloud is made up of physical assets, and of these, data centers are the most expensive. These assets are regional, and that means the cloud is, too. Moving information from one data center to another remains a major hurdle even in 2021.

### But what if the cloud were different?

Using satellites to transfer information between data centers is an unprecedented opportunity for data center optimization through differentiation. With the tremendous cost reductions this could produce, companies that leverage this opportunity will be able to create a downward price pressure that competitors without space initiatives will find difficult to withstand.

To many technology sector leaders, space initiatives are not an obvious threat in the cloud space, because so much of the growing need for data storage and transfer is latency-dependent—for instance, in AI, real-time analytics, and elsewhere. Transferring data by satellite can't support those use cases (yet). What it can do is support data transfer for latency-independent purposes, such as storage of archived data that is rarely accessed. These workloads, which can be low- or even negative-margin for cloud providers, are necessary prerequisites to platform stickiness, and in turn to sell high-margin services such as compute and GPU-enabled solutions.

### What if cloud providers had a way to get these activities out of their top tier data centers?

These top tier data centers could service more users and more of the latency-dependent activities that produce the highest margins and create pricing advantages.

Satellites provide exactly this opportunity. With a strong space infrastructure, cloud providers can put latency-independent workloads somewhere else—just like a manufacturer sequestering its sold-at-negative-margin inventory in order to free factory floor space for high-end, high-margin machinery.

Could Blue Origin be Amazon's secret strategic advantage, hiding in plain sight? Thanks to its connection with Blue Origin, Amazon Web Services could lay the groundwork to optimize its data centers in this way, opening the door to advantage in the race for cloud margin and capacity. A cloud provider that leverages this opportunity will free up its data center capacity, allowing it to put pricing and margin pressure on competitors that lack similar capabilities. In this way, satellites may become Amazon's secret weapon in the critically important race for cloud margin.

In 2020, the US Federal Communication Commission (FCC) - the US regulatory body - approved Microsoft's application to connect its Azure cloud service with ground stations. Amazon received similar approval for its AWS Ground Station service. While the public focus is on unique and innovative customer use

## Could price pressure force cloud providers into costly third-party agreements with satellite providers such as SpaceX?

cases, it's important not to overlook the tremendous business opportunity created by the supply-side optimization capability unlocked by satellites.

There is still time for competitors to respond, but that time is running out. Data center outsourcers and others conducting cloud operations without their own networks will need costly third-party agreements with companies like Elon Musk's SpaceX Starlink to compete. Microsoft is banking on its Azure Space initiative to expand its presence in space. Microsoft and similar competitors should leverage their investments and programs in this area—not just to expand their products' footprint and use cases, but also to counter competitors' emerging price advantage and make up lost ground in the cloud space race.

## Bill Gates's and Craig McCaw's vision for Teledesic was prescient

Visionary thinkers Craig McCaw and Bill Gates launched Teledesic in 1990 to provide "fiber-like" connectivity to an "Internet in the sky." Its time has come; not just for innovative use cases for people and digital transformation, but also for cloud providers.



## CONTACT US

Optrilo is cloud demand forecasting and capital planning software that uses advanced machine learning and AI to distill your best possible cloud spend from business targets three years in advance, enabling proper governance, risk mitigation, P&L management, and savings of up to 75%.

Every aspect of the Optrilo product is tailored to deliver insights and analysis that help you create plans that speak the language of the business, support business goals, and are synchronized to an actionable and technical cloud capacity plan.

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