KIO Networks

WHITEPAPER

DIGITAL ECOSYSTEMS

The new *must* in Data Centers


RESEARCH
by KIO Networks®

CONTENT

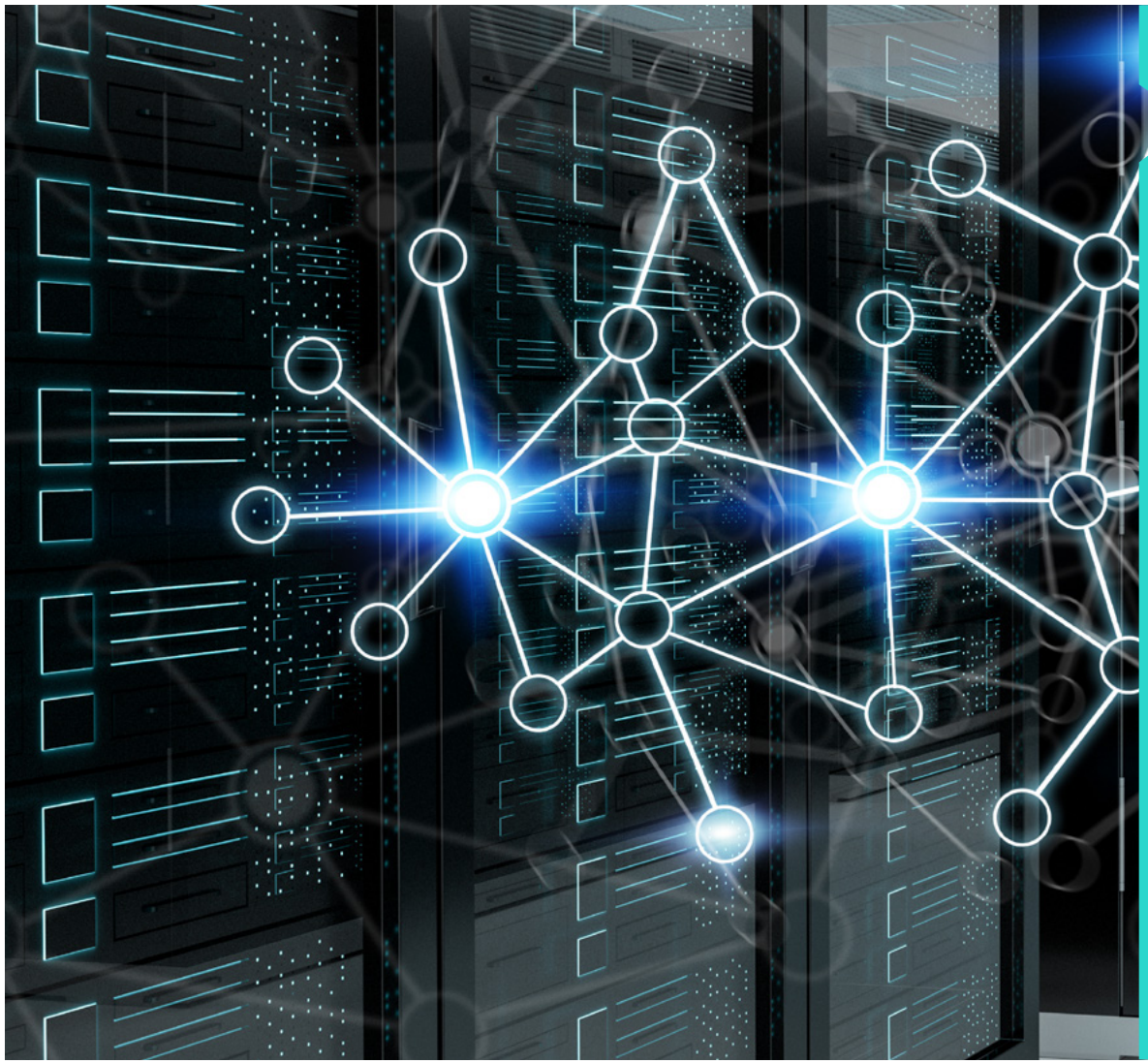
Introduction: a different reality

The world has changed: in the personal sphere, the "new normal" has made us adapt to a world that has, out of need, become more and more digital.

Companies can't escape this need. In their search for resilience, organizations have found, in Data Centers, not only a flexible choice with options made to measure, but also better access to the market and the means to innovate more quickly and increase productivity.

This poses a great challenge for the CIOs, since they must focus on the transition from a value chain business to an omnidirectional one, through partners that help them focus on the end client and improve the quality of service.

This evolution means preparing in three areas: technology, organization and leadership. In the first category, the most important factor will be choosing a Data Center with the greatest number of associations in the market. This is the basis for building new business opportunities, different models, improved business applications, and much more.



The important thing is to choose a Data Center with a greater number of associations in the market, since this is the basis for constructing new business opportunities.

Yes, the world has changed. And this new and different reality has given rise to the emergence of digital ecosystems: neutral centers where the most significant modern business transactions take place.

The whole is greater than the sum of the parts

- Due to the COVID-19 pandemic, companies have transformed their operative models to satisfy the new demands of consumers, without moving away from focusing on achieving growth.

- Nonetheless, the constant changes carried out during this contingency period made the “control and centralize” perspective obsolete, giving way to a revolution in which “connect and combine” stand as the new musts of the business.

"By 2025, ecosystems or comprehensive networks could represent global income of 60 billion dollars or about 30% of the estimated global economy, compared to the one or two percent that it currently has."[1]

McKinsey & Company

Digital transformation has been in the vanguard of the strategies of many organizations. But, even for the companies that had already begun their digital trajectory, the following stage indicates a greater challenge, though something not foreign to man: the creation of an ecosystem that helps them to interact with those outside the company and makes them improve their current performance.

1 McKinsey & Company (2021). Majid Al Futtaim’s new growth formula: Innovate fast, stay ahead, work the ecosystem, referenced in June 2021.

In nature, communities of living organisms interact with each other and their environment: they develop, create and share resources, compete and collaborate—all simultaneously—to adapt to changing external circumstances.

The same thing happens in the business world: as the digitization within organizations matures, it's more probable that these transform into part of a digital ecosystem, with the natural habitat of these being the Data Center.

"The future of industrial ecosystems goes beyond associating with more companies and organizations; it's also about leveraging the exchange of data, applications, operations and experience, expanding the platform."[2]

IDC

2 IDC (2020). The Future of Industry Ecosystems: Built on the Platform and Sharing Economy, referenced in June 2021.

The essence of the digital ecosystem

Digital ecosystems are habitats encouraged by digital connectivity. They are the result of several technological forces that create a network of receivers of data, with whom the companies share information and co-create value for a mutually beneficial purpose: from commercial gain to innovation.

In a digital ecosystem, many economic actors—to a large extent independent—join forces to create a digital offer that is more valuable than the product or services of a single company. "Some digital ecosystems develop solutions, like an automobile connected to a smart house. Others bring together buyers and sellers on a digital platform."[3]

It is projected that soon 12 massive ecosystems will emerge, that they will be distinguished by human or organizational needs and that they will specialize according to their economic areas of activity.[4]

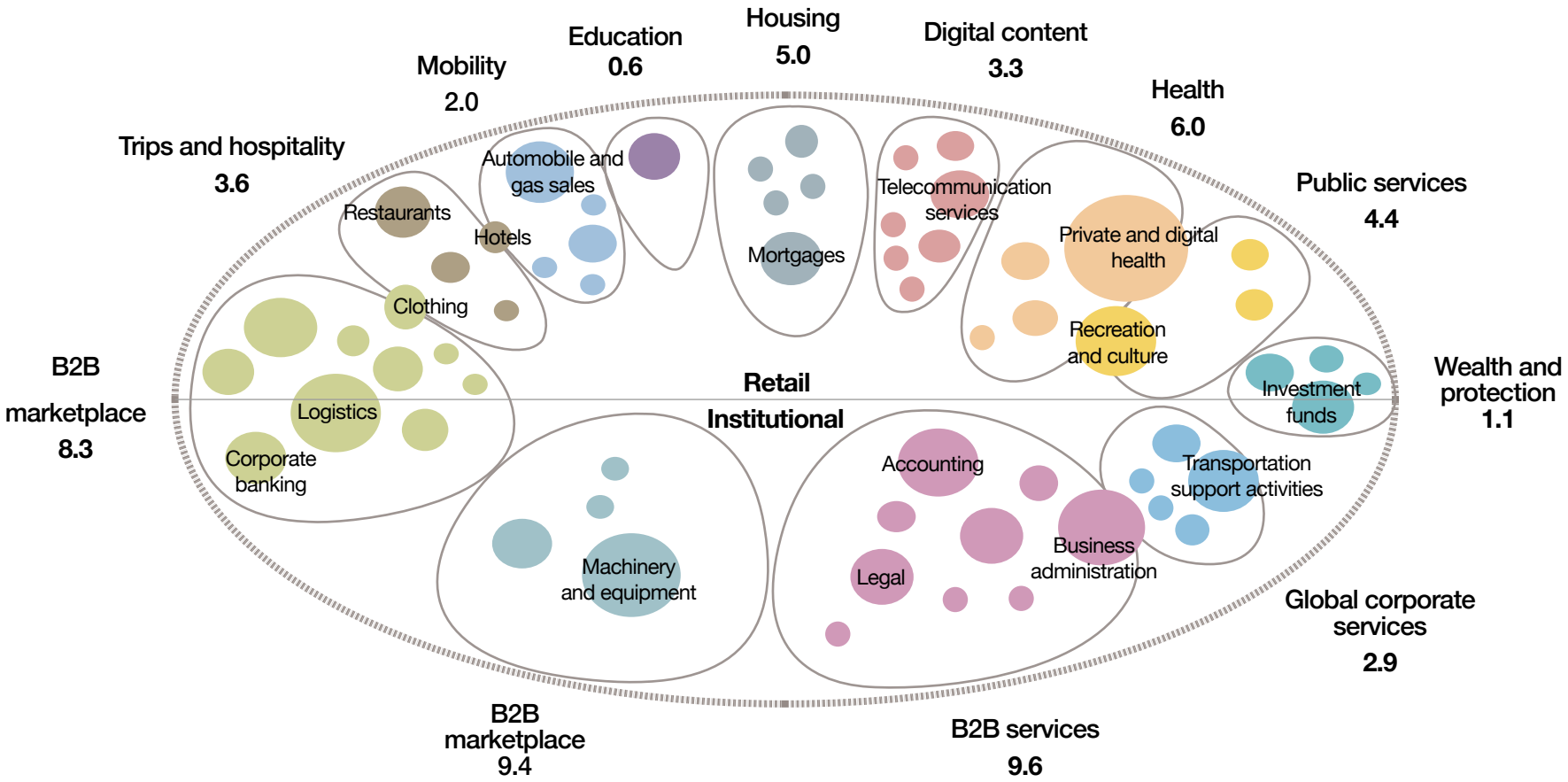
As would be expected, the information that these digital ecosystems collectively produce is a potential gold mine for Artificial Intelligence (AI) applications and advanced analysis tools that work their magic only when they are fed large amounts of high quality data.

It is in this way that these ecosystems allow organizations to interact with clients, partners, adjacent industries and even with the competition, which makes it possible for the companies of which they are composed to find new business opportunities, take advantage of new sources of data, and improve the established commercial processes.

3 Boston Consulting Group (2019). What Does a Successful Digital Ecosystem Look Like?, referenced in June 2021.

4 McKinsey & Company (2017). Competing in a world of sectors without borders, referenced in June 2021.

Estimated total sales in 2025*, in billions of dollars.



*The sizes of the circles show the approximate sizes of the revenue groups. Additional ecosystems, other than the ones described here, are expected to emerge; not all industries or subcategories are shown.

Source: Analysis by McKinsey & Company, IHS World Industry Service, estimates based on corporate sales data, GDP industry breakdown and assumptions of experts.

In the digital era, less is less

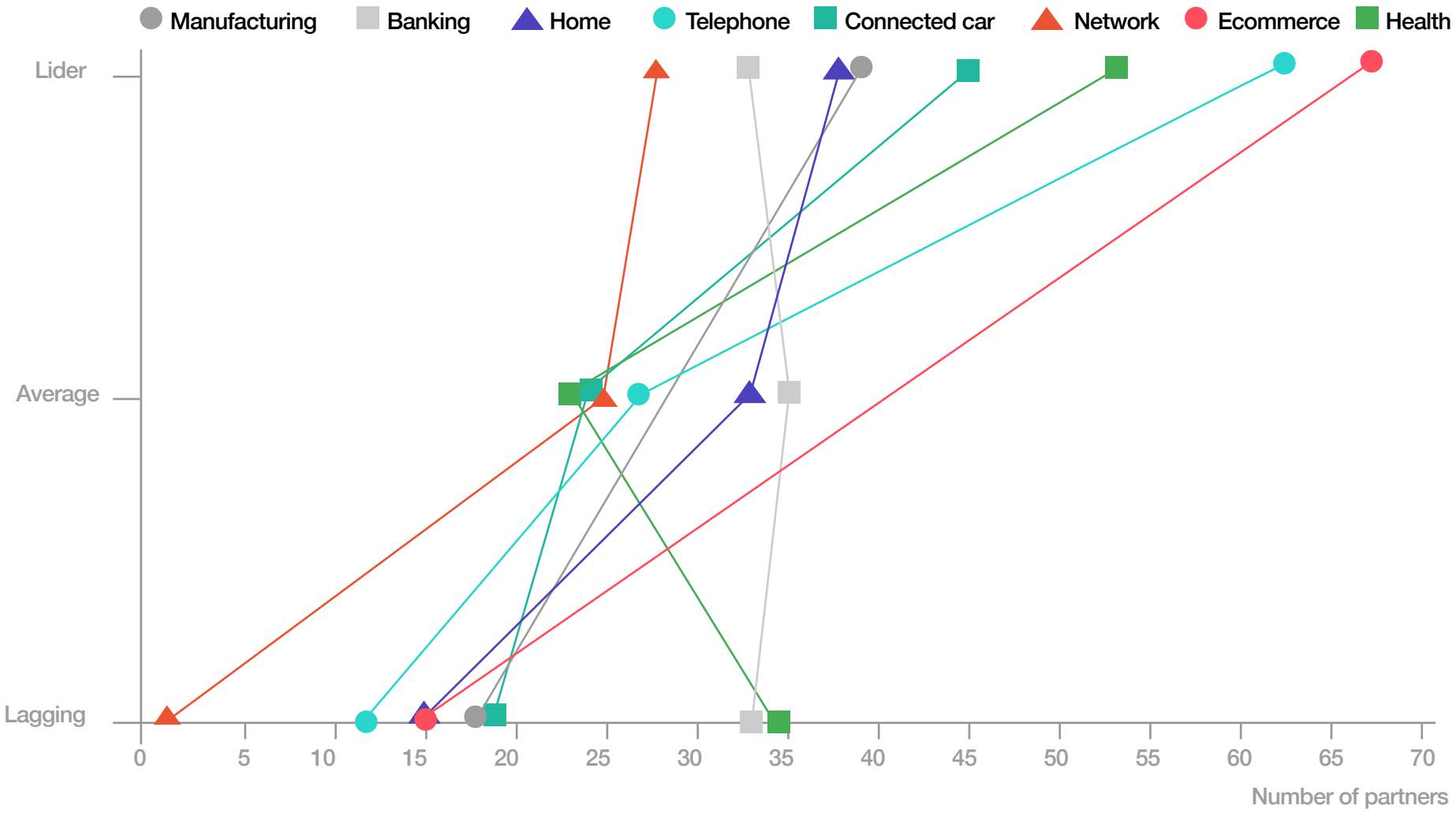
Each new digital ecosystem is unique, created with parts that were carefully selected and have a purpose, on their own and functioning together. It is because of this that companies can move more quickly, maximize their productivity and minimize investment, while the inherent benefits multiply with each new partner, who shares applications, information and bandwidth, through mutual use of the ecosystem.

Ecosystems are forging great economic power. Indeed, not adopting these business models is one of the five obstacles responsible for the failure of digital strategies, according to McKinsey[5].

5 McKinsey & Company (2018). If you're not building an ecosystem, chances are your competitors are, referenced in June 2021.

BCG assures us that a robust digital ecosystem is one that has more than 40 associations. They also note that 90% of digital ecosystems involve participants from more than five countries.[6]

The most successful digital ecosystems have approx. 40 partners



Source: Analysis by McKinsey & Company, IHS World Industry Service, estimates based on corporate sales data, GDP industry breakdown and assumptions of experts.

6 Boston Consulting Group, op. cit.

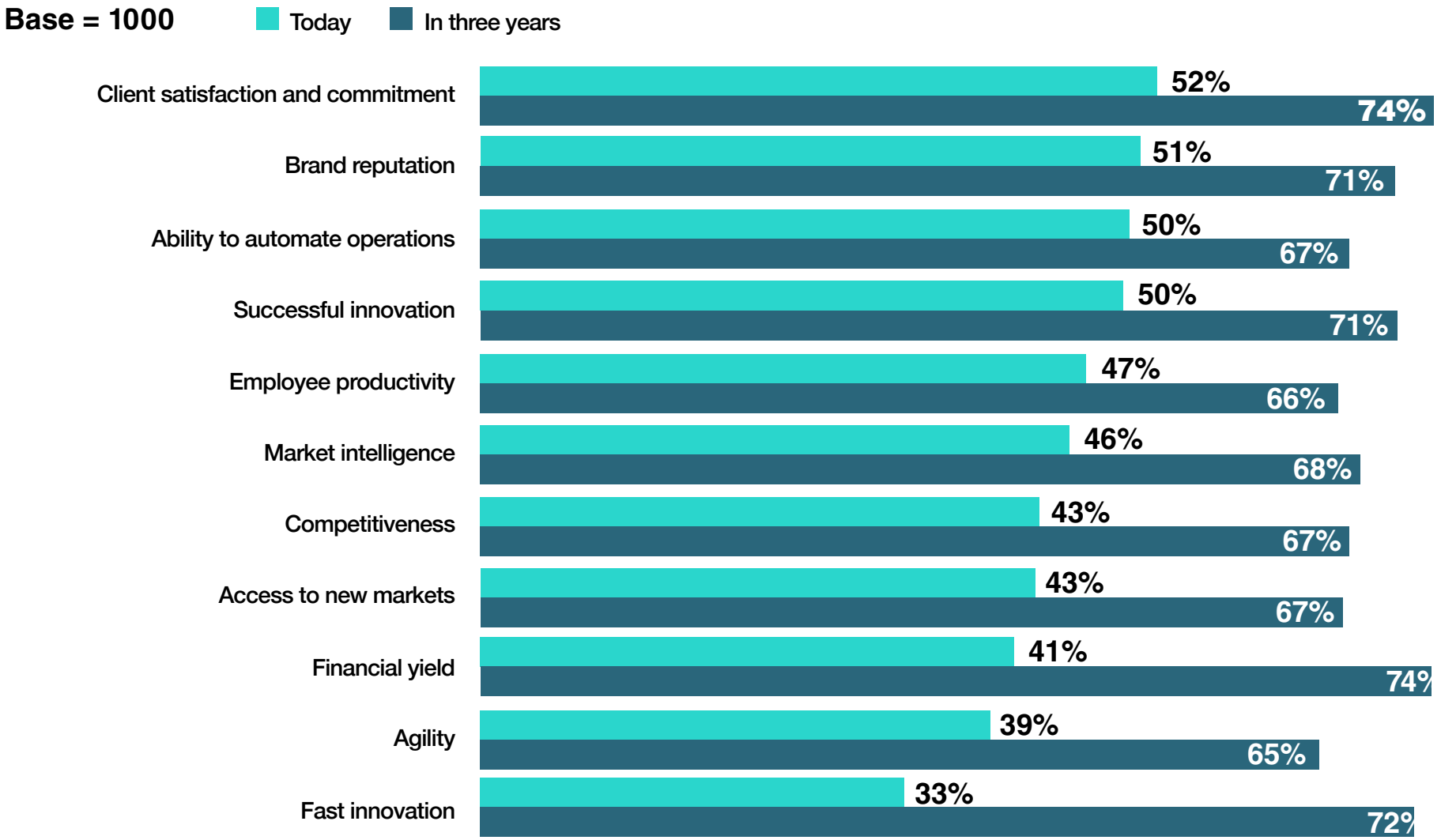
"The most successful ecosystems were orchestrated by an established market share leader. These leaders were better positioned to attract partners with suitable abilities and financing."[7]

Google Cloud

The same BCG research shows that 83% of digital ecosystems involve partners from more than three industries and 53% from more than five. Analysis suggests that an ecosystem will do better with a greater number of partners from a greater number of industries.

7 Google (2020). How an API-powered digital ecosystem can drive innovation and efficiency, referenced in June 2021.

Question: To what degree do your commercial relationships and ecosystems currently support the following commercial objectives? And in three years? Showing responses of "substantially" and ”very significantly"



Source: Google (2020). How an API-powered digital ecosystem can drive innovation and efficiency.

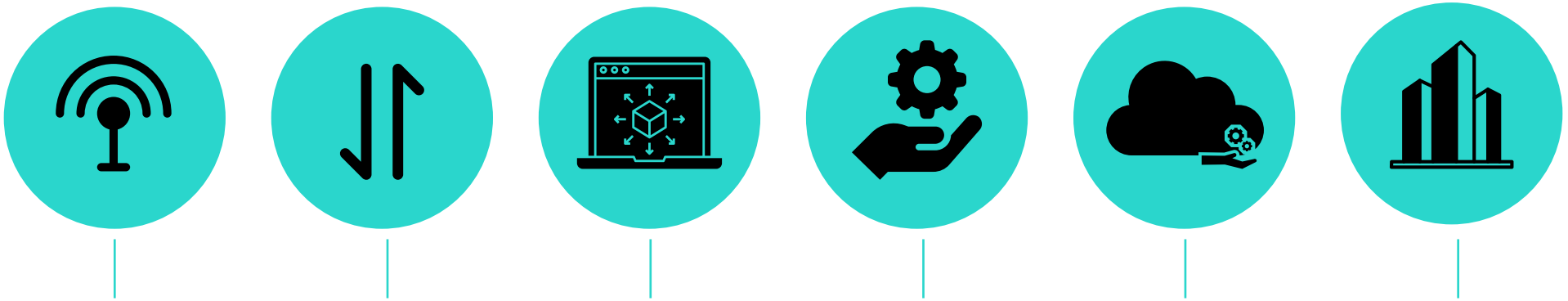
Who participates in a digital ecosystem?

In the past, a business Data Center was a safe island with a strong connection located in the central office and a good Internet connection.

Today, hybrid solutions, a wide range of Cloud providers and service providers deserve an “operations base” in a neutral location with direct connections to other partners, maximum redundancy and, to the degree that use increases and new applications are created, even more bandwidth.

When interconnection is combined with high-speed company access to the multi-occupant Data Center and assets such as computing power, storage and, in particular, the creation of networks are included, what is achieved is taking the company and its applications to the network, in contrast with the obsolete model of taking the network to the company.

Actors in digital ecosystems



Network Providers

Internet Exchanges

Content Delivery Networks

Managed Services Providers

Cloud Providers

Companies of all sectors

The great achievement of digital ecosystems consists in their taking a company and its applications to the network, instead of the obsolete model of taking the network to the company.

The benefits of a new model

Digital ecosystems evolved as companies began to digitize and automate their operations, which led to many organizations attempting to scale up and compete in the growing digital economy, especially because they needed access to more than one provider, location and data source.

When performance and capability demands increased, Data Centers changed and interconnection between clients became essential. Basically, a Data Center is less like a shopping center and more like a huge mall with the best brands interacting and where everyone wants to be.

When clients connect directly to the networks and the Cloud providers that share their environment, costs are reduced. This is achieved, above all, by eliminating private connection charges and avoiding the public Internet.

Furthermore, an interconnected ecosystem also reduces the distance that data has to travel, which significantly reduces latency and improves performance. Connecting directly to clients reduces the number of potential failure points, thus improving reliability.

Finally, this ecosystem can scale indefinitely in a virtual manner, adapting to the needs of each occupant with flexible and profitable growth.

Being part of a digital ecosystem is like having a space in a large mall, where the best brands of products and services interact: it's the ideal location to do business, even though you are right next to the competition.

In a world of ecosystems, what's your strategy?

Getting involved in a digital ecosystem requires a new set of abilities and management capability. In an environment of this type, companies must figure out how to simultaneously bring in external technology while managing security and controlling the fast-paced flow of IT innovations.

According to McKinsey & Company, the way or combination of ways that a company chooses in order to interact with various ecosystems (or create their own) depends on their strategy, the market environment, their appetite for risk and investment in new capabilities.[8]

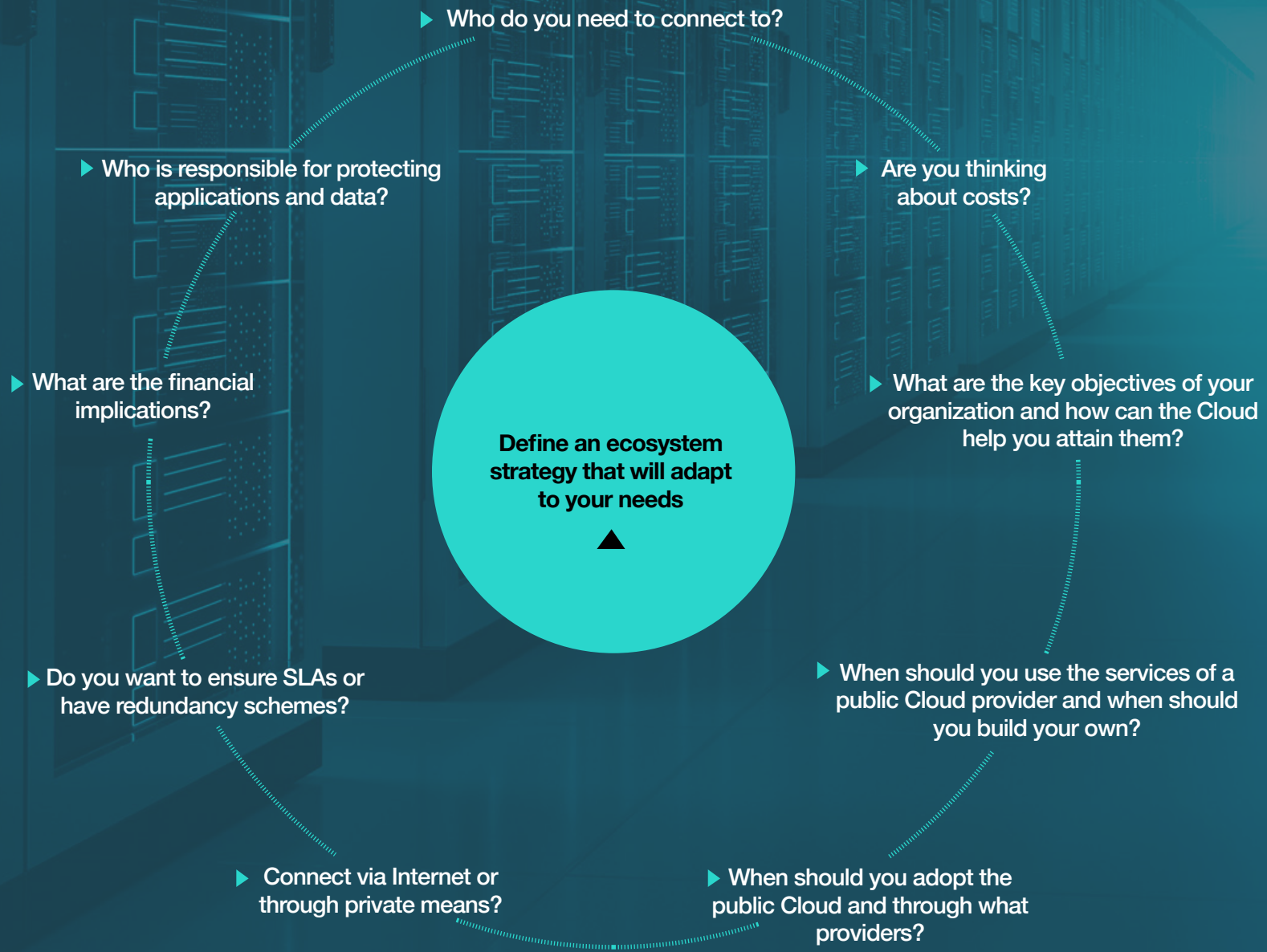
Facing this reality, the answer lies in colocation Data Centers and in neutral points (ISP) which facilitate data transfer between applications and services, since it is there that distances are eliminated.

For this reason, neutral, hyper-connected Data Centers are much more than locations to store equipment: they are spaces where, thanks to the offering of connectivity, access to public Clouds, and peering between platforms and services, organizations attain transparency and opportunities to be a part of a winning ecosystem.

In this type of ecosystem, organizations can access private links and direct connections to leaders of specific sectors (like healthcare, banking, or government) or a company from the Fortune 500 list.

8 McKinsey & Company. (2017). Adopting an ecosystem view of business technology, referenced in June 2021

Strategic questions to ask yourself before becoming part of a digital ecosystem



Choose a colocation provider that offers optimized infrastructure and an application environment capable of reaching your entire audience.

How do you select a suitable colocation partner?

Scalability, activity time and reliability are as essential as choosing the ideal technology partner.

Choosing a suitable colocation provider permits an organization to eliminate the complexity of its operations and to efficiently increase its presence throughout the world, in addition to easily interconnecting the Cloud and other data centers without the need to manage multiple service providers.

It is vital that your provider be knowledgeable about the national electric infrastructure to prepare future investments, as well as have a complete understanding of where the fiber operator networks are and give you an "on ramp" access solution for public Cloud platforms.

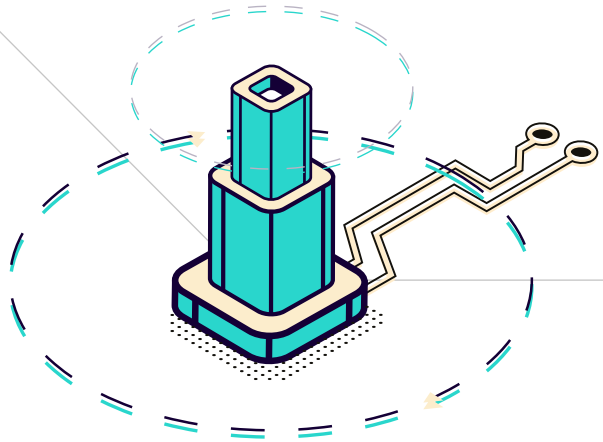
There is a lot to consider when choosing a partner: from physical security, disaster recovery, Data Center activity time guarantees, service levels, scalability, reliability and certifications, through to support and continuous maintenance.

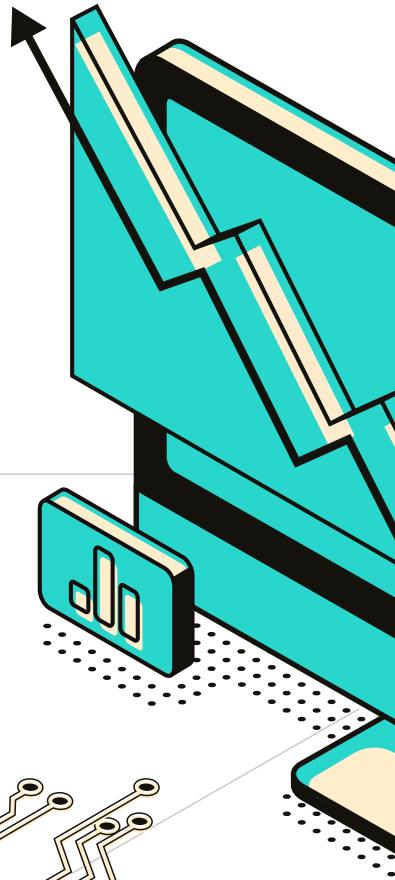
Don't forget to choose a partner whose experience and level of service allows them to offer you a data analysis strategy that will help you understand your clients and operations better than the competition.

A practical case

ACME is a top Mexican company; it has a website, applications in the public Cloud and a COLO where it has its private infrastructure. ACME wants to ensure that the experience with their content is very fast.

There are basically four key questions that must be answered for a given business in order to take advantage of the specific benefits of becoming part of a digital ecosystem:



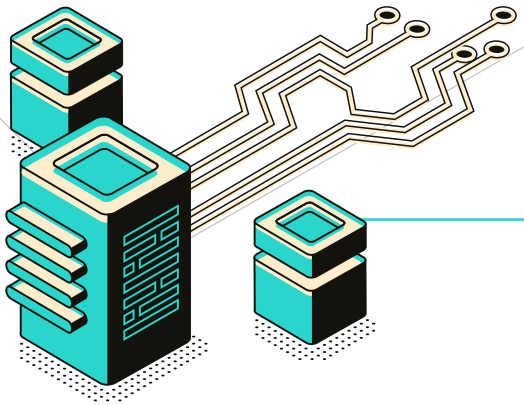


1. Who do they need to connect with?

- To provide low latency, the local connection is the fastest.
- But ACME opted for a CDN leader with a Cross-Connect that will allow them to distribute their web page quickly all over the world.

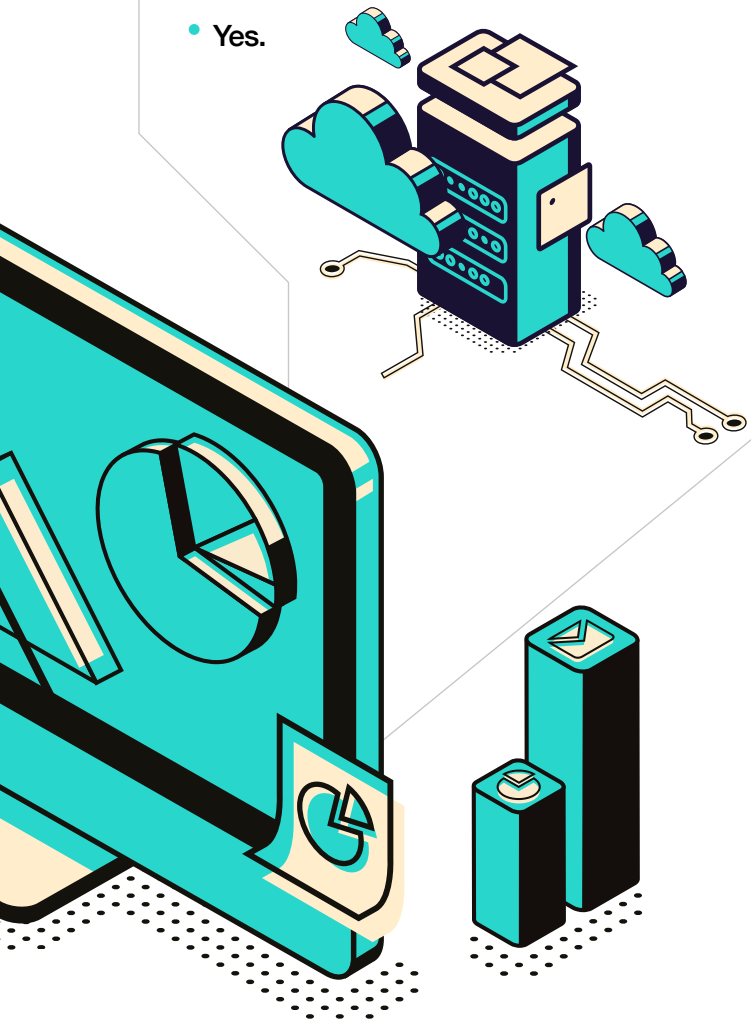
2. What is the best way to optimize costs?

- Local connections within a DC are more effective than remote connections.
- Internet connections are very cost effective, but without SLA.
- For private connections, reliability is ensured with an SLA.
- Because of traffic volume, it made sense to have a dedicated service, which also ensures better performance.



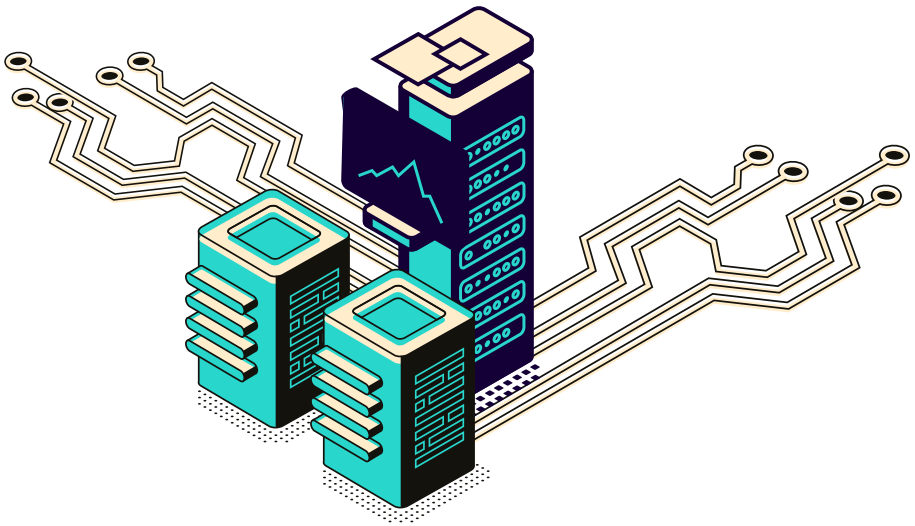
3. Do they have operations in the Public Cloud?

- Yes.



4. Is speed a critical factor for the business?

- Yes.
- To provide low latency, the local connection is the fastest.
- But ACME opted for a CDN leader with a cross-connection that will allow it to quickly distribute its website around the world.

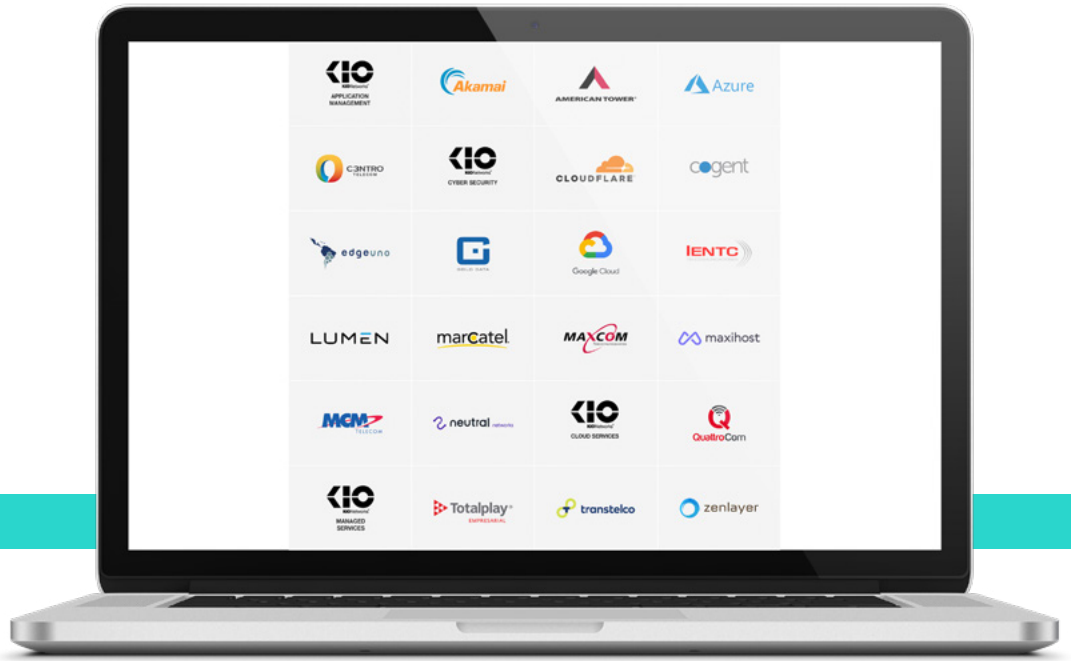


ACME decided to place itself in two Edge Data Centers, located in the North and South of Mexico, which, furthermore, helps maintain velocity in these regions and provides redundancy due to distribution.

DXE Marketplace: the ideal ecosystem

At KIO Networks we have created the Data Xchange Ecosystem: the biggest habitat for business interconnection in the country, which includes the most important suppliers of digital networks, content and digital media, as well as organizations in all categories and providers of Cloud services and IT.

Today, more than 2,000 companies trust us and have established themselves in a digital habitat that is so structured that it allows for the definition of entire industries.



We have flexible commercial models, viable alternatives to continually add more digital resilience, functionality and vanguard solutions to support the digital transformation of any organization.

Digital ecosystems are the key to the digital transformation of tomorrow. Learn how KIO makes it possible.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