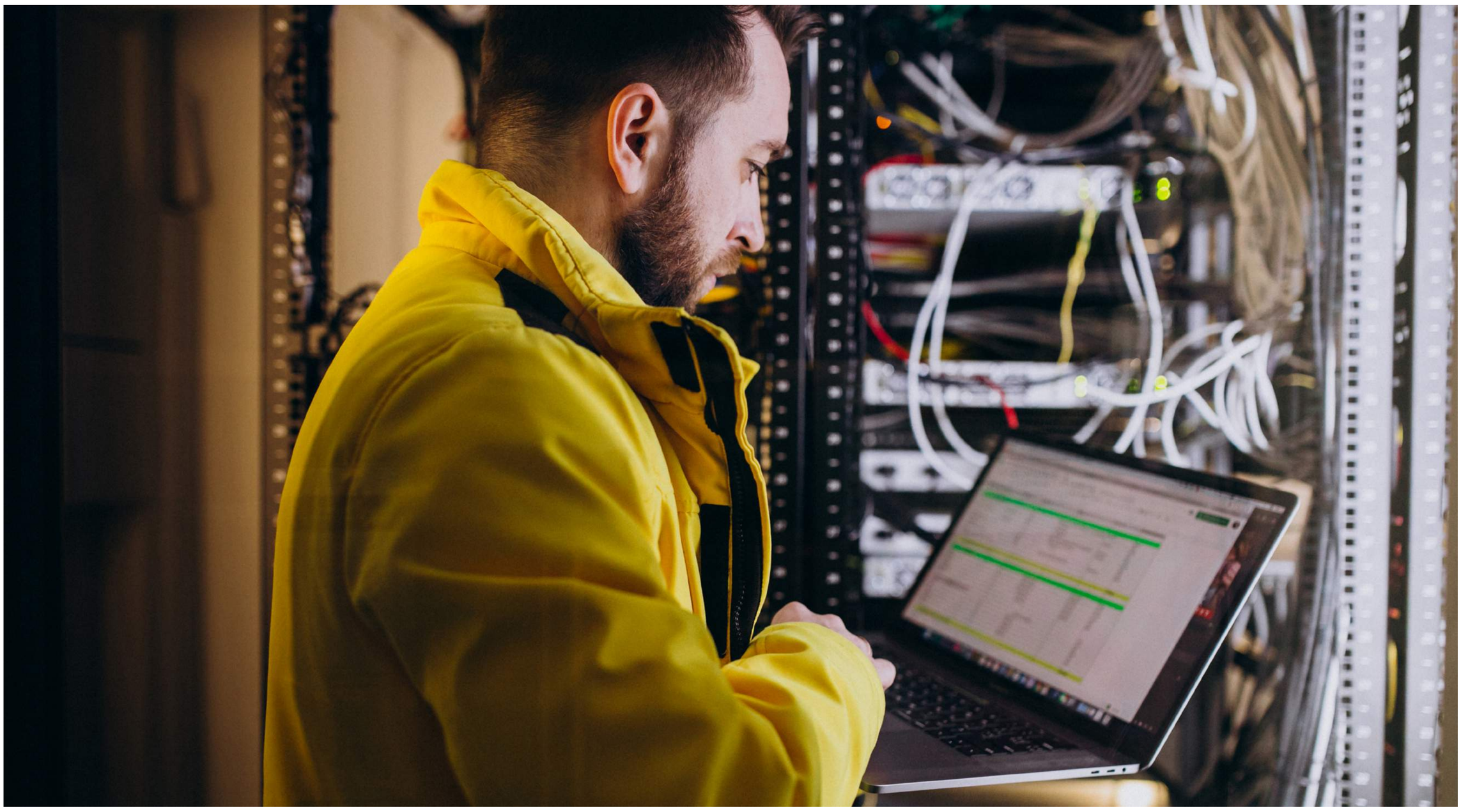
COLOCATE OR BUILD YOUR OWN DC? THE TCO SUMS IT ALL



Data collection is increasing as we speak. Over 150 trillion gigabytes of data will need to be analysed by 2025. Managing it in-house becomes difficult beyond a point. Costs such as real estate, power, cooling, staffing, data protection, and certifications mushroom with every additional asset. Colocation Data Centers take care of all this holistically.

Colocation Data Centers work as mission-critical components for most organisations. As a financially concentrated resource, calculating its True Cost of Ownership (TCO) can help organisations analyse the efficiencies in Colocation investment in contrast to setting up their in-house Data Center.

Colocate or Build Your Own Data Center?

There is a schematic way of calculating, understanding, and rationalising the CapEx and OpEx of a “typical” Data Center. The analysis below will help organisations analyse these alternatives’ underlying efficiency and expenses through well-known parameters.

COLOCATION

A Colocation Data Center is a practical solution that allows the benefits of an enterprise-level Data Center without the upfront investment. While some start-up fees are associated with the migration, these are significantly lower than building a private Data Center. It works as a third-party IT infrastructure that allows organisations to place their servers and other essential hardware within the facility of a third-party. Organisations retain full control of their data and hardware, while leaving the power, security, cooling, and network connectivity to be managed by the Colocation Data Center provider.

The Pros of Colocation

1. Economies of Scale

Colocation plans often come in bundled packages that offer multiple services under a single plan. Plus, Data Center providers are well-equipped to scale out additional resources while handling the storage needs of multiple businesses under a single roof.

2. Carrier-Neutral Connectivity

A Colocation Data Center provides a wide range of connectivity options to choose from. Multiple Telcos, CSPs, ISPs and Internet Exchanges make it easy to build an infrastructure in line with an enterprise's bespoke needs. With cross-connections and hybrid/multi-cloud architecture, organisations can optimise their workloads for maximum speed and functionality.

3. Availability and Reliability

In comparison to an average on-premise solution, Colocation Data Centers use a much more robust infrastructure with round-the-clock service teams. There are extensive redundancies in place with fallback scenarios that allow the Colocation provider to keep the systems running irrelevant of the calamity. Mirrored data for reliable disaster recovery, high-end physical security features, and emergency services in case of power outages ensure that the promised Service Level Agreement (SLA) is adhered to.

4. Efficient Savings

Modern Colocation Data Centers need to keep up with changing technologies to stay on top of the industry. This allows them to keep the costs under control more efficiently over time. Setting aside the substantial outlay of setting up an in-house Data Center, Colocation also saves operational costs month over month, thanks to better optimisation and energy efficiency.

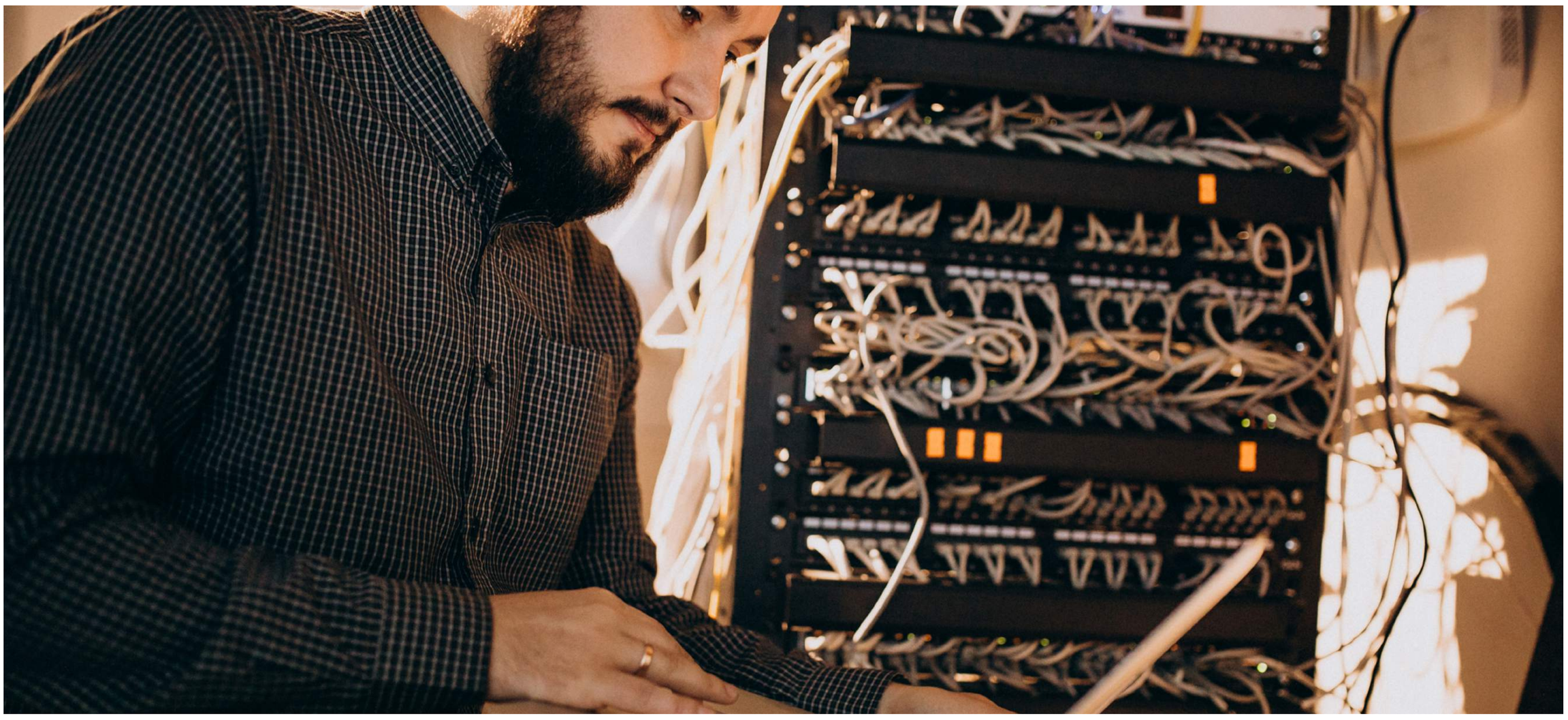
The Cons of Colocation

1. Potential Lack of Control

Sometimes Colocation providers fail to assist their clients with the right set of tools that can harness the power and bandwidth required by the organisation. This can lead to performance issues and third-party dependence for regular maintenance. Although, if the standards set by the Uptime Institute are followed in selecting the Colocation center, a benchmark for resilience and uptime can be ascertained.

2. Distance Parity

If the Colocation facility is located in a remote area, the physical access to the company hardware shall be varied. The issue can affect troubleshooting schedules, leading to a delay in timely monitoring and increased latency. Hence, when mapping out a route, the shortest possible distance should be aimed for.



Build Your Own Data Center

An Enterprise Data Center or on-premises Data Center means that servers are located in-house within the organisation's own facility. While some companies may want the benefit of control that a private Data Center provides, the significant costs of building such an infrastructure may make it impractical. The upfront expenses include a fair amount of capital injection through planning, design, commissioning and real estate. Plus, the process goes way ahead of that. Fire suppression, cooling systems, local permits, network connection costs and power maintenance trigger a heavy demand for operational budgets that are sometimes difficult to predict.

The Pros of Building Your Own Data Center

1. Complete Control

Keeping all the infrastructure, applications, and data in-house means retaining control over all aspects of deployment. Large enterprises with significant resources gain from leveraging their in-house facility to capitalise on market opportunities without worrying about how a DC provider shall accommodate their ambitions.

2. Compliances

In cases of complex compliance needs, organisations are quite hesitant to outsource their IT infrastructure requirements to a third-party. Plus, the Indian landscape is continuously evolving in terms of the regulations set for data storage and management. With an in-house Data Center, companies can constantly monitor their compliance status, mitigating any operational or financial risks.

3. Compatibility

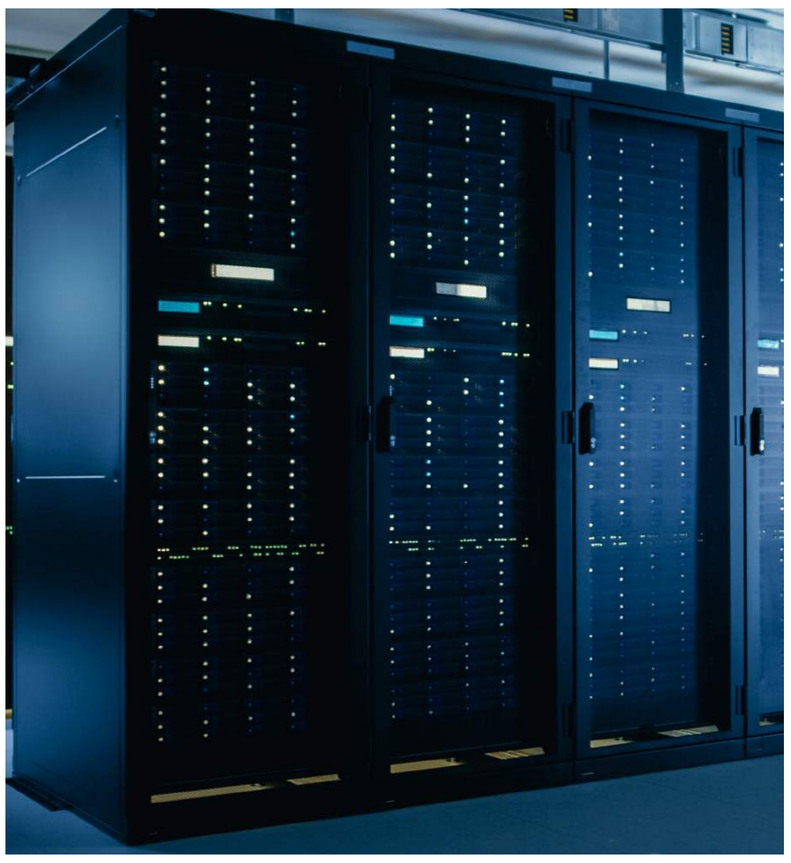
Considering an organisation relies on legacy systems, migration to a new environment can be disruptive in nature. The risks associated with the process could potentially be endangering for the business processes. Sticking with an on-premise solution might work in the organisation's favour here.

The Cons of Building Your Own Data Center

1.The Business Case for Efficiency

The costs for setting up an in-house Data Center must be compared with the true cost of opportunities generated in the industry. Due to the excessive CapEx at the initial stages, private facilities can sometimes be converted from predated servers. This means they're not optimised for modern applications and can rarely handle the high-density workload, leading to depleting performance. An attempt to scale and update the infrastructure results in diminishing returns in such cases.

2. Inflexibility Across the Board



While, on the one hand, private Data Centers offer a potent blend of control and compatibility, they also constrict the facility in conventional architectures. They are designed to handle the current network load and nothing more. As a result, when growing businesses introduce new services, these systems cannot meet the high demands, creating bottlenecks across the spectrum. The fundamental objective of tapping on market opportunities is effectively lost due to the inability to scale.

3. High Costs of Capital and Staff Onboarding

On-premises solutions require organisations to build extensive backup plans laced with disaster recovery capabilities and emergency personnel. Apart from this, they also need to have continuous access to IT support staff and redundant servers, creating an automated response to any disruption in the network infrastructure. The whole process puts emphasis on further capital outlay and resource management, which can get relatively overwhelming with time.

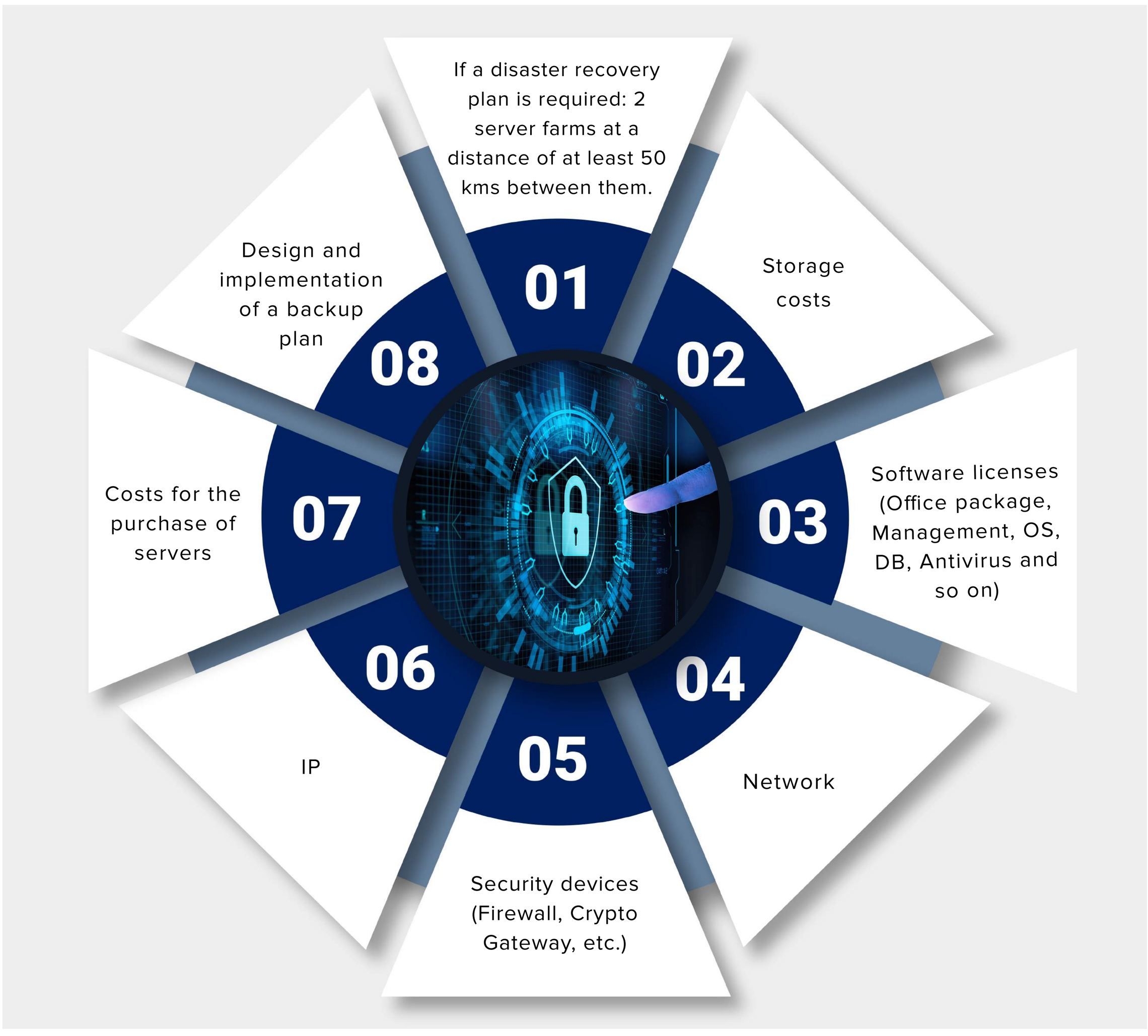
4. Cumbersome Certifications

A privately-owned Data Center requires multiple sign-offs from authorities spread across the IT gamut. Certifications such as SSAE16 and HIPAA need to be acquired in line with the requirements and processes stated within them. This adds to the total costs and headaches of building and managing an on-premises Data Center.

TCO Comparison

IT investment is measured in terms of Total Cost of Ownership (TCO) which is a sum of operational, capital and maintenance expenses. It accounts for all the outlay involved in obtaining, utilising, installing, sustaining, changing, and disposing of IT and Data Center assets. To understand the parity between alternatives, a Data Center is sized by the amount of protected electrical capacity of the facility measured in kilowatts (kW).

Based on the Uptime Institute benchmarks, building a Data Center is significantly more expensive. For instance, a Tier-II level mid-sized enterprise facility providing 99.741% availability with 160 racks at 5.0 kW/rack in a 5000 sq. ft. area calls for a capital injection of over $10 million. It includes:



Plus, there are associated costs of updates, energy consumption, technical support, staff training and end of life disposal. This total build estimate is completely avoided in the case of a Colocation Data Center.

There are essentially two kinds of charges attached to third-party investment:

1. Cost of Colocation services
2. Internet, Fiber, and Local Loop Expenses

Considering how all system, electrical, maintenance and cooling overheads are covered under the Colocation service package, it leads to around 64% of cost savings over a period of five years. With the absence of CapEx, immediate scalability and business continuity at zero cost, organisations are migrating to Colocation Data Centers, taking advantage of their sophisticated architectures that promise reliability and flexibility.

How Web Werks Helps Organisations Colocate Their Critical IT Infrastructure And Accelerate Digital Transformation

Web Werk's rich Interconnection ecosystem helps organisations establish real-time direct connections to multiple Internet Service Providers (ISPs), Internet Exchanges (IXs), Content Delivery Networks (CDNs), and Cloud Service Providers (CSPs) for efficient, high-performance networking solutions.

Below are some of the few reasons why over 850 organisations trust Web Werks's Data Centers to efficiently manage their critical IT infrastructure:

1. Uptime-guaranteed facilities with all critical infrastructure and N+N redundancy to ensure zero downtime.

2. A robust mesh of 6 layers of round-the-clock physical and logical security, including three-factor biometric access controls, meticulously background-checked staff, man-traps, and CCTV surveillance.

3. An array of global certifications for effective compliance to HIPAA, PCI-DSS, and GDPR that meets the most stringent regulatory requirements of financial institutions and other data-centric industries.

4. An industry-leading Power Usage Effectiveness (PUE) of 1.66 leveraging a host of carbon-neutral technologies that seamlessly adhere to global Go-Green concepts.

5. A comprehensive suite of managed services like Disaster Recovery, Cloud On-ramp, Security, and Storage.

To learn how Web Werks can help your organisation accelerate its Digital Transformation journey, please visit https://www.webwerks.in or get in touch with us on +91 8828 335 555.