

Facilitate growth

HPE Facility-as-a-Service (FaaS): pay for your data center as your business grows



Creating a new data center approach

Over the last several years, enterprises have made significant strides in increasing data center efficiency, building better utilization and cost management, and establishing greater agility and improved connections between IT and the data center, with integrated management tools and processes. However, today's rapid changes in business landscapes and shifts in technology are outpacing IT and data center strategies.

Is your data center ready to deliver?

Traditional data centers face an uphill climb to meet business goals. These data centers were neither designed to tackle the requirements of cloud computing, mobility, Big Data, and social media, nor are they sustainable in terms of space, energy, and cost. The pace of growth in IT loads, the adoption of methodologies to keep pace with delivering IT services to the business, as well as the need to address innovation exacerbates the inadequacy of traditional data center approaches. Upgrading an aging data center can become a costly and time-consuming venture. Figure 1 shows the flaws of this traditional approach to a data center. And without proper planning, improvements can fall short in meeting your technology objectives. Building new data centers to keep pace with change is an expensive proposition. Plus, there are other impacts to consider, such as changes in IT provisioning and determining where applications or workloads should reside—on traditional IT or in the cloud. Research suggests that 75 percent of IT executives plan to pursue a hybrid cloud delivery model by 2016.¹

Hewlett Packard Enterprise has been at the forefront of addressing these seismic shifts in IT. Converged Infrastructure, a term first coined by Hewlett Packard Enterprise, has helped change the IT landscapes of clients. And with the impact on IT from mobility, Big Data, cloud adoption, and the ensuing issues to preserve security are now being addressed through the delivery of IT Solutions for the New Style of Business. But how does this apply to the data center?

For several years, Hewlett Packard Enterprise, has led the way with its wide modular data center offerings, ranging from a multi-tiered hybrid design of traditional custom brick and mortar data centers, through its pre-fabricated solution, HPE FlexibleDC, to the highly efficient HPE Performance Optimized Datacenter (POD). The New Style of Business requires a new approach to operating data centers. An approach that can help organizations more efficiently provision their IT service delivery, improve the financial management of data centers, create more efficient management, and release capital for business initiatives. More importantly, Hewlett Packard Enterprise can now deliver greater value to organizations such as yours by better aligning your data center strategy with your IT service delivery strategy.

What's needed is the ability to own a facility that can be modified as quickly as required and at a fraction of the cost. You require a facility model that is sustainable from one generation to the next. Hewlett Packard Enterprise has the answers: the HPE modular data center offer combined with HPE Facility-as-a-Service.

¹ "HP (now Hewlett Packard Enterprise) Unveils Cloud Innovations to Help Customers Thrive in a Hybrid World," HPE press release, December 2013. m.hpe.com/us/en/news/details.do?tid=1536858&articletype=news_release

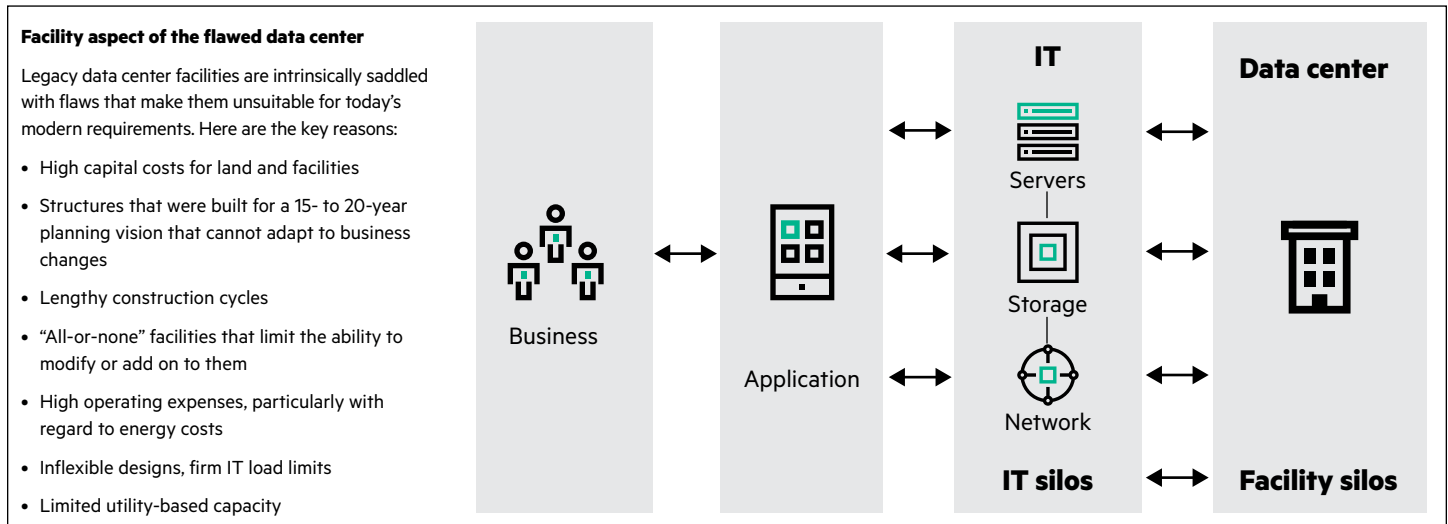


Figure 1: The flawed traditional data center

The modular data center approach

Data center infrastructure has started to evolve far beyond the traditional centralized approach. Cloud, data as a driver, and the distributed environment all require greater agility. By their nature, conventional data centers historically lock the building and its IT infrastructure into an inflexible package. They're handicapped by a rigid "brick and mortar" construction. To regain control of both capital expenditures (CAPEX) and operating expenditures (OPEX) while providing faster deployment and more flexibility, data center designs are adopting modularity as the way forward.

Modularity is characterized by greater pre-fabricated industrialization and containerization of components, more effective climate control, better supply-chain management, improved maintainability, and a more effective facility that better accommodates converged infrastructure and cloud computing models. A modular data center incorporates innovative design and appropriate reliability; is right-sized for current IT needs; and packages all of these features into a factory-built, prefabricated, and repeatable module. Now data centers can grow and expand in a timely and efficient manner to match business growth in much shorter cycles. This translates to data center agility for the New Style of Business that is capable of expanding as IT scales. And it is the modular approach that provides many of the benefits of HPE Facility-as-a-Service.

HPE modular data centers—A complete package

Within the HPE Facility-as-a-Service solution, modular elements typically include power systems, cooling plants, and data halls, with distribution, fire protection, security, and monitoring built in. Hewlett Packard Enterprise has the widest range of modular data center approaches, providing choice in terms of portability, flexibility, time to market, scale, and customization. Figure 2 shows a range of modular data centers with Hewlett Packard Enterprise components.

The modular data center range

- HPE POD
- "Standard" modular (FlexibleDC)
- "Custom" modular
- Multi-tiered hybrid brick and mortar



**Capacity,
cost, and time to
deployment**

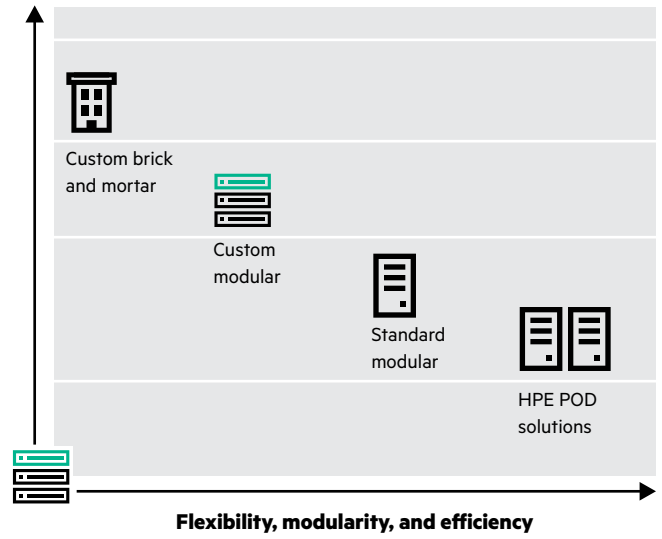


Figure 2. HPE modular data centers

“Financial institutions create an enormous volume of data, which means they need to be able to quickly add capacity to their data center without disrupting business. HPE FlexibleDC is a promising new approach to the way organizations can meet computing demands efficiently while addressing capital-intensive data center costs.”

– Bob Cashner, senior vice president, Corporate Properties, Wells Fargo

HPE Facility-as-a-Service

HPE Facility-as-a-Service (FaaS) provides a revolutionary way for you to operate a data center. It enables you to match data center strategic planning to the business need and current or projected revenue, which drives capital and operating budgets. Fueled by the New Style of Business and its impact on data center requirements, Hewlett Packard Enterprise has combined a modular data center approach with a new cost model. Overestimating or underestimating data center requirements has always been a big challenge, leading to the growth of colocation providers and outsourcing as solutions to significant capital requirements. Now, by adopting the HPE FaaS approach, you can gain greater operational flexibility and additional sourcing choices.

First, Hewlett Packard Enterprise provides you with a modular data center within a fully leveraged maintenance service agreement. The service agreement typically includes initial design, implementation, and commissioning of the data center. In this way, Hewlett Packard Enterprise works with you to help ensure that the data center design meets your changing

business needs and that it is built and functioning as designed before operations begin. It's used as a client-operated facility, the cost of which is included within the agreement as well as an ongoing maintenance program. Next, Hewlett Packard Enterprise removes all the guesswork from your data center requirements, including future expansion, and you remain in total control of your IT, while being able to keep data center costs in line with revenue. It's a new alternative to funding the building of a new data center or utilizing colocation space, which were the only previous options available for owner-operated solutions. If you need ongoing operational support in addition to scheduled maintenance, you can turn to Hewlett Packard Enterprise to provide the level of service you need while you still maintaining full control of your own IT.

With an expandable, modular data center in place, you mitigate the risks of expending a large upfront capital investment that may be underutilized for many years until future growth is actually realized. The risk of requiring additional capital investment because of initial underfunding, building too small, and reaching capacity unexpectedly is also mitigated. With operating costs that are evenly expended and better matched with expected revenue streams and cash flow, you can reallocate financial resources to your core business. HPE FaaS helps you maintain key financial metrics such as debt to equity and return on assets while still providing you with the facility and level of control you need.

HPE Facility-as-a-Service offers the following benefits:

- Reduces initial capital investment and redirects capital resources
- Provides a long-term operating service agreement with full operating coverage
- Provides an owner-operated model that is designed to meet your needs and allows you to maintain control of IT
- Provides a new alternative to complete outsourcing or colocation
- Is designed to your use case for capacity, criticality, and provisioning
- Is a modular approach that provides provisioning to match future IT rollout plans
- Adds modules over time so that facility costs can be matched to revenue streams



How does HPE FaaS compare to current methodologies?

HPE FaaS changes how data centers can be approached as a facility to provision. Current methodologies include building a data center, utilizing a colocation space, migrating IT to the cloud, outsourcing, or combinations of these approaches. The essence of HPE FaaS is that it provides the owner-operated advantage of the traditional data center approach with the operating expense-based approach of the colocation model. It retains the advantages of each approach, while leaving behind their disadvantages.

TRADITIONAL SELF-BUILD	COLOCATION SERVICES	HPE FaaS
Data center is a "one-off" project	Client pays "rent" for shared data center	FaaS is an ongoing partnership between the client and HPE
Relationship with constructor ends except for warranty	Client has no control nor input into decision-making/management	HPE provides a data center that meets client's needs today; provisioned for ongoing
Client assumes risk; what is built meets their needs	Provider owns and controls the facility and infrastructure	Facility develops as client's needs change
Funding needs justifying vs. business needs	Provider controls access and change management	Client maintains physical control of the facility and its operations
Temptation to overbuild to alleviate pressures on availability and capacity	Client adjusts IT to colocation's capacity/reliability restrictions	Facility's costs match business needs at the given time

The financial justification of HPE Facility-as-a-Service

Building a new data center requires a significant amount of capital expenditure. A major factor in choosing to use colocation facilities is that initial capital outlay is not required, but the month-to-month operating expense makes it a more expensive financial proposition over time. Figure 4 shows the cumulative cash outlay with a new build, colocation, and HPE FaaS options. In this example, the client must find the revenue required for site preparation and, potentially, land acquisition, but beyond that, cash outlay over time is fixed and covered by operating budgets. HPE FaaS requires minimal capital outlay. In the example shown in figure 5, with operating expenses over time, one of the balancing acts organizations face with making the decision to invest the capital in a new build is to take advantage of lower demands on cash flow when compared to colocation costs.

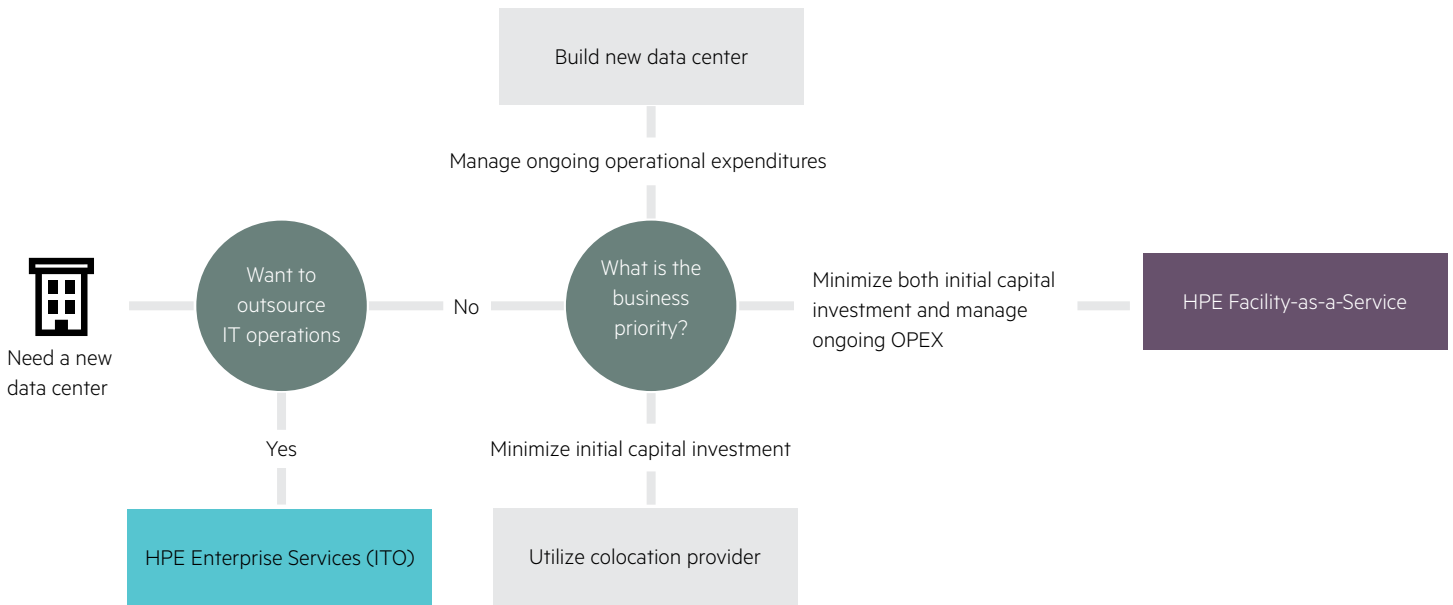


Figure 3: The HPE Facility-as-a-Service decision tree

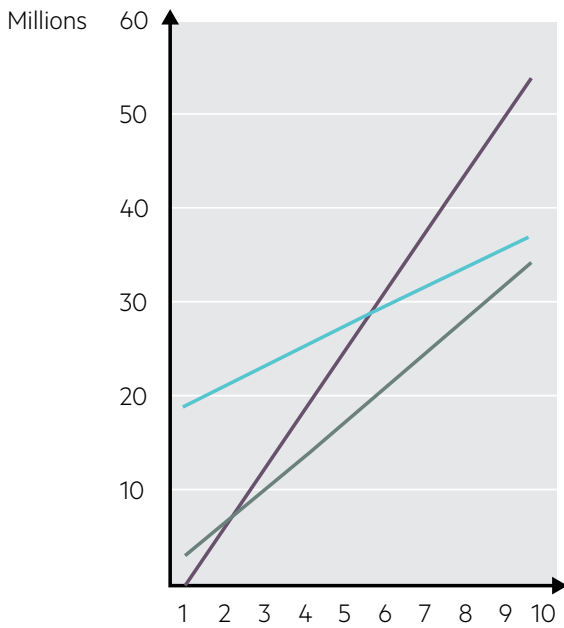


Figure 4: Cumulative cash outlay for a facility with 1 MW day one capacity

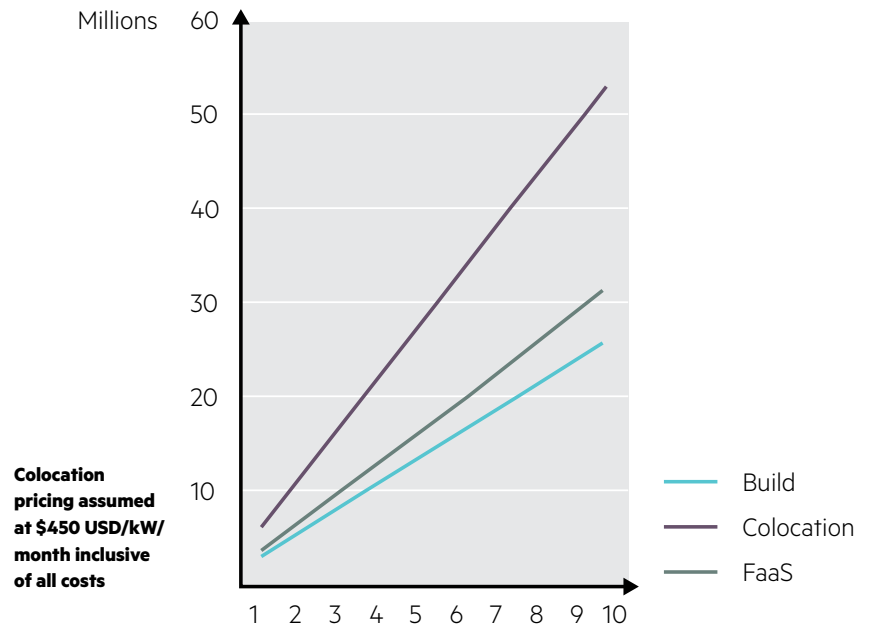


Figure 5: Cumulative OPEX for a facility with 1 MW capacity



Conclusion

HPE Facility-as-a-Service gives you full financial as well as data center flexibility for new or retrofit data center planning. You can choose from the full range of HPE's modular solutions, custom brick and mortar, custom modular, HPE FlexibleDC, or HPE POD. HPE retains ownership of the facility and infrastructure components, with all the cost of provisioning the data center included within the ongoing maintenance service agreement. By combining the cost model with a modular approach, HPE FaaS provides you with new data center facilities that are matched to your requirements as they change. It matches your exact operating needs today, and enables you to remain in total control of your IT. You also align your data center costs to revenue streams and cash flow. Hewlett Packard Enterprise removes all the guesswork, keeps you in control, and provides the right finance model.

Hewlett Packard Enterprise is uniquely positioned to provide you with this service. Our data center facilities consultants and engineers have worked on similar projects with enterprise organizations around the globe. We have designed more than 65 million square feet of data center space. We are responsible for more than two-thirds of all LEED Gold and Platinum certified data centers, and we've put our years of practical experience to work helping many enterprises successfully implement their data center programs. Now we can do the same for you.

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