IT infrastructure leaders face hard choices these days.

Workloads continue to proliferate, resources are perpetually constrained, and “doing more with less” has become a way of life. As a result, the last few years have seen a pronounced shift in focus: less preoccupation with capital expenditures, and a much deeper examination of operational expenses, especially skilled labor.

Gather any group of IT leaders together, and it isn’t long before the talent issue comes up. Even if budget is available, finding and retaining skilled IT professionals is becoming more difficult with every passing year. Smart infrastructure leaders are looking for new ways to leverage their scarce talent on projects that matter, and spend less time on activities that don’t create unique value.

All of this is not lost on IT vendors. We’ve seen a variety of new IT infrastructure models that attempt to minimize the effort associated with IT infrastructure: design, implementation, and ongoing operations. The thinking is simple: less time spent keeping the lights on means more time to move the needle.

The industry recipe is familiar: preintegrated servers and storage, packaged and supported as a single “product”. Whether labeled “converged” or “hyperconverged”, the pitch is the same:

IT pros shouldn’t be spending their time assembling generic infrastructure for generic applications.

And, up to a point, IT leaders are right.
Not All Applications Are the Same

In *Animal Farm*, George Orwell famously writes, “All animals are equal, but some animals are more equal than others.”

The same can be said about IT applications, and their infrastructure requirements. Take a look around your IT environment, and ask yourself: Which applications really matter? Which ones does the business value above all else? Where is the application investment most concentrated?

Most likely, these applications are powered by databases that demand the utmost in predictable performance, absolute availability, rock-solid data protection and ironclad security. These aren’t generic requirements, and thus aren’t well served by generic infrastructure—regardless of whether it is hand-crafted by the IT team or acquired preintegrated.

Yes, Cloud Is upon Us

There’s an important new dimension in infrastructure thinking that can’t be ignored, and it’s *cloud*.

Whether you think of cloud as an architectural model, an operational model, or a convenient consumption model (or all three), the enterprise boundaries are clearly not just four walls of the data center. At a minimum, any modern infrastructure decision should potentially be able to support all three aspects of cloud: architecture, operations and convenient consumption. Infrastructure that doesn’t prepare for this next wave of cloud adoption is short-sighted at best.
Inherent Limitations of Converged and Hyperconverged

While familiar converged and hyperconverged offerings represent an improvement over traditional self-built, self-integrated and self-supported infrastructures, they can fall short in several important regards.

**First** these products are designed for generic workloads: they do OK at most things, but aren’t usually optimized for any one thing. This can be a substantial disadvantage when considering database and application workloads.

**Second** none of these products offers a convenient, compatible public-cloud option. Enterprise IT groups will need to evaluate their own alternatives, do their own integration and become proficient at supporting two or more distinct environments.

**Third** these newer preintegration solutions still force users to deal with multiple vendors for this critical portion of the IT landscape. In addition to the infrastructure vendor, there’s a separate hypervisor vendor, perhaps a data-protection vendor, a database vendor, and one or more application vendors—not to mention public-cloud providers.

**In today’s challenging IT environment, less is more.**
Engineered Systems: Going Beyond Converged and Hyperconverged

Oracle has seen much success since the 2008 introduction of Oracle engineered systems: infrastructure that is uniquely coengineered with database and applications in a way that generic infrastructure simply can’t begin to achieve.

Database applications get purpose-built infrastructure and a streamlined operational model that delivers more performance, uses fewer resources, and dramatically improves data protection and security.

For database applications, it’s simple:

Oracle engineered systems do more and cost less than their generic counterparts.

And for IT shops interested in evolving their investment towards cloud, the Oracle Cloud provides precise equivalents to on-premises capabilities: the same technologies, same functionality, same management.

Oracle engineered systems do a better job with today’s demanding database workloads, and can help IT teams move forward to the next generation of cloud architectures, operational models and consumption options.

On paper, it’s a very attractive proposition—one that thousands of IT shops around the globe can validate.

But It’s Not Conventional Thinking

Many IT infrastructure professionals have built their careers by becoming proficient in selecting, integrating and supporting home-grown infrastructure stacks. The notion of a purpose-built, preintegrated solution that does far more—and requires far less of their unique expertise—is usually met with resistance and skepticism.

Unfortunately, it’s not about facts; it’s about beliefs. Organizational mindsets are hard things to change. We, as human beings, prefer to remain in our comfort zone—until forced to move outside.

That forcing function usually occurs when business requirements can no longer afford the ineffectiveness of generic infrastructure approaches for their most important applications.
The Quiet Crisis?

An industry transformation is upon us, as evidenced by big shakeups in the infrastructure vendor world—with more to come.

Cloud is quickly becoming the new architecture—spanning data center and public cloud as a homogeneous whole.

Winston Churchill offered sage advice: “Never let a good crisis go to waste.” And, indeed, a spectacular failure around a critical business application—or a massive organizational shake-up—can cause a rapid change in behaviors and perceptions. But what if there is no smoking ruin?

Smart leaders know how to use a “quiet crisis” to force important changes: reorganizations, budget cuts and new missions. The message is clear: “That is how we used to do things; this is how we will do things going forward.”

And, when it comes to IT infrastructure for important applications, maybe we need a quiet crisis before a serious one rears its ugly head.