

Operational Sustainability: A Definition

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“Operational Sustainability” is the ability of a site to meet the operational objectives over extended periods of time. There are two diametrically opposed approaches to design and operation of data centers, strategic and tactical.

Strategic sites are more sustainable over time. This is because the ‘reasonably known unknown factors’ are anticipated in the design, construction and operation of the site.

In the long run, Operational Sustainability has a greater contribution to providing long term site availability than topology. Topology is addressed by the Institute white paper titled, *Tier Classifications Define Site Infrastructure*. Topology is the configuration of the built environment. Availability is the uptime delivered by the built environment. The expectation that availability will be present is defined by the site’s reliability. Completing predictable and preventive maintenance, for example, increases the reliability, which in turn improves availability. These factors are all woven together and contribute to what ComputerSite Engineering calls “Operational Sustainability.”

Operational Sustainability considerations touch on design, operations, and management decisions in virtually every system. These decisions are best made by individual owner teams as the decision is heavily dependent on the client’s tolerance for risk, future availability requirements, and emerging business expectations, as well as other decision factors that cannot be dictated by reputed standards bodies.

For clients who are serious about availability, it simply does not make sense to limit thinking to the topology decisions. Sites with exceptional focus on the operational (human) issues are able to achieve substantially better performance for their data centers than similar sites with matching topologies but without the operational focus. It only makes sense, then, to begin to think about the Operational Sustainability factors at the same time as basic topology decisions are made.

There are five categories of Operational Sustainability that warrant owner’s attention:

- Site Selection
- Building Characteristics
- Fitness for the Intended Use over Time
- Investment Effectiveness
- Management and Operations

Within each of these five categories, there are corresponding attributes that dive much deeper into defining how the data center can be transformed into a strategic asset capable of meeting the long term operational objectives of the business. These will be presented in the new ComputerSite Engineering white paper, *Operational Sustainability and Its Impact on Uptime Performance, Investment Value, and Resiliency*, due out in February 2008.