

## Performance matters

# Safeguard your investment with effective commissioning

Commissioning has fast become a staple of data center expansion. This complex and rigorous process typically involves five stages:

- Planning for safety systems, testing processes, resources, continuity, etc.;
- Factory testing for pre-functional quality assurance and documentation;
- Inspection to verify completion of work and site acceptance;
- Functional testing of performance at load, redundancy, calibration, metrics, etc.; and
- Integrated testing, including heat and load simulations and other in situ testing.

Commissioning is intended to both safeguard your investment and alleviate future concerns as much as possible. In addition to IT placement, connectivity and administrative infrastructure, commissioning validates numerous mission-critical areas, including the availability and distribution of power; airflow and cooling; fire detection and suppression; cabling; and business continuity in a disaster.

The specific tasks associated with each area can vary depending on the nature of the construction, the physical site and servers. For example, if your data center is co-located with another facility, that requires additional tests to your security and utility systems.

### Engage early and often

Commissioning is typically overseen by a key supplier or a third party. Early engagement counts for a lot: a commissioning script that is developed early in the process can greatly enhance steps such as ABB's Factory Witness Testing (FWT). During FWT, multiple technical experts collaborate on pre-functional testing of containerized solutions and power systems with the customer present.

By contrast, weak commissioning scripts are highly inefficient. For example, an integrated UPS test can stress batteries, reducing the amount of charge available for future tests. A strong script takes battery run time and recharge time into account, and specifies the most efficient functional testing sequence.



### Take a holistic view

Commissioning is, in effect, the science of establishing reliability to the greatest degree possible across the integrated data center environment. The process should take a holistic approach, incorporating data from all parts of the infrastructure being commissioned – power, cooling, environmental and security. This provides critical information that can be used to manage the full facility, including IT asset data, post-commissioning.

ABB's Decathlon® for Data Centers DCIM system not only provides tools for testing during commissioning; it also eliminates barriers between facility operators and IT management by having both departments work from a single data set. In addition, Decathlon supports the integration of asset management software which serves the needs of both departments by optimizing space, power and cooling capacity through intelligent placement of IT assets.

For more information visit [www.abb.com/datacenters](http://www.abb.com/datacenters)