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## TQ Corner

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<http://tmiamerica.com/texas-projects.html>

## Can I Quote You?

"Things may come to those who wait, but only the things left by those who hustle." *Abraham Lincoln*



## Optimizing Your Critical Facility

Not just a buzz word, but "To make something function at its best or most effective, or use something to its best advantage". Optimization is a worthy goal to save your company money, help to maintain an edge on your competition as well as to contribute to your company's green initiatives. The following are several strategic initiatives to realize greater energy efficiencies and to cut annual energy costs in your critical facility.

**Assessments:** Today, data center optimization assessments can help you close the information gap and start to get a handle on your energy consumption. The assessment scope should include

both physical data center and the IT infrastructure. Assessing these areas provide insights into your data center's energy efficiency. As an industry, we have found that only 30 percent of every dollar spent on energy was actually used by the IT equipment. Traditionally, the power required for non-IT equipment in the data center (e.g. air and power equipment) represented, on average, about 50% of total annual energy consumption. The rest of the IT energy, therefore, was spent on inefficient equipment layouts, support systems, and other infrastructure. One can implement solutions to cut energy consumption typically be-

tween 10 to 20 percent or more annually. The payback can be achieved in two to three years, while also covering the cost of the assessment immediately.

**Energy consumption:** If you can't measure it, you can't manage it. Therefore, tracking energy usage history and service levels is necessary and can be very valuable in the energy management process. Today, major companies are working on several products for example to monitor, manage, and control outlet power level; manage cooling capacity, temperature and humidity; and to distribute power to servers on demand. These new prod-

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## Everything's Bigger in Texas

Technology Management, Inc. is pleased to announce the opening of its Southern Regional office located in Dallas, Texas. The continued economic strength, growth, and diversity of this ideal metropolitan area has seen more than its fair share of robust

growth in the IT sector. The news media outlets continue to report the many new and exciting corporate happenings. Firms continue to value the locational, high skill, and available labor pools and other business incentives to oper-

ate in this vital regional market place.

Throughout our history, we have been serving clients throughout Texas including completing many design/build projects and consulting assignments in Amarillo, Austin,

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ucts will improve operations towards more efficiency.

**Cooling technologies:** Cooling and power has become a major problem in many data centers: high-density equipment, such as blade servers, demand enormous power and air cooling. Therefore, reviewing alternative cooling methods, products, and studies is a must. For example, there are energy-efficient systems (e.g., cooling systems and methods that do not require much power, if at all, to operate) which can effectively reduce heating problems at the rack level. In-row cooling, rack cooling units or rear door heat exchangers, ceiling-to-rack panels, and rack curtains/panels are just a few examples of methods and technologies available now for improving cooling in the data center. There are also thermal engineering studies for data centers; use of

Computational Fluid Dynamics (CFDs) that simulate and predict the air velocities, pressure, and temperature distribution in the entire data center facility.

Explore options to upgrade the data center: Through discussions with our clients, we've heard many times that older data centers are unable to power and cool the newer IT equipment- especially servers – in an energy-efficient manner. Together with rapid IT growth, companies are looking to consolidate or centralize data center operations from the older facilities to achieve space savings and other benefits such as increased manageability. A centralized new data center provides an excellent way to gain major capital and operating savings. A new data center can significantly reduce energy costs contributing to an estimated 30 to 40 percent reduction in operations costs.

**Managing your operations:** Experience suggests that companies can double the energy efficiency of their data centers through more disciplined management; reducing both costs and greenhouse gas emissions. In particular, companies need to manage technology assets more aggressively so IT equipment can work at much higher utilization levels; they also need to improve forecasting of how business demand drives applications, server, and data center-facility capacity so they can curb unnecessary capital and operating costs. Today the average utilization of servers is 8-15% at best. Virtualization of servers and storage deployments offers an excellent solution.

With use of our Data Center Optimization Assessment we can help your organization with valuable solutions.

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Dallas, Houston, Plano, San Antonio, and Waco. We have designed IT Centers, Data Centers, Colocation Facilities, and Call Centers for industry leading organizations.

More recently, TMI completed the design and development of a new IT Center for a large healthcare organization in San Antonio (confidentiality agreements preclude our providing client information). The Greenfield site development is an approximately 47,000 square feet facility, with 15,000 square feet of data center space. Other adjacent and interior areas include data center support equipment, operations personnel and general support space, a Network Operations Center, a Security Operations Center, and a Help Desk. Its

scalable design will allow expansion to nearly three times its size in future phases.

Initially, TMI provided client advocacy services during pre-design to help determine the overall size of the IT Center, as well as the design criteria. We then served as the project architect, combining a team of architects and engineers to design the core and shell, as well as the tenant finishes. TMI was also the developer and the system testing and commissioning agent of the center.

Our core services, including data center design and project management, and related data center project service offerings are all available from our new Dallas, TX office. We continue to deliver

these select services with incomparable expertise and knowledge and at very competitive prices to our clients. The advantage for TMI is that we believe our customers and their respective business interests will be best served for each and every data center project or consulting request, from smaller to the very large and complex projects, by having TMI representatives proximal to their locations. We continue to work diligently to be as responsive as possible. We hope you agree that you, the customer, will be the benefactor of our commitment to best serve you towards your success in the years ahead. We look forward to working with you.

## Recently Completed Projects

[NewAge: Feasibility study of a new Greenfield wholesale data center facility in Milwaukee](#)

[Therm Flo/Cyber Development: Architectural design of Phase II of data center suites in Mt. Prospect, IL](#)

[EMC Client: Structured Cabling System Design in a healthcare organization in Cleveland](#)