



# DATA CENTER DIAGNOSTIC

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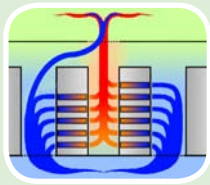
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## Most data centers have 2 to 3 times as much cooling as they need for their server load, according to the Uptime Institute.

That means that up to 66% of conditioned air is wasted. This inefficiency costs you energy and money and threatens your information integrity.



Under-floor distribution often over-delivers air to the cold aisles. This air flows up to the ceiling and back to the CRAC units. Wasted air means wasted energy.

## Why Green Lane Design?

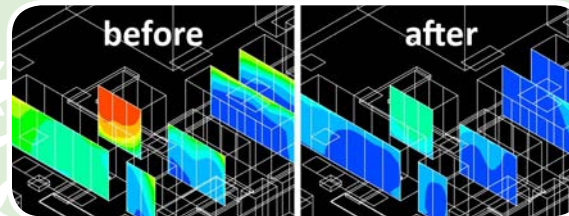
At Green Lane Design LLC, we know the most important aspect of your data center is reliability. By minimizing risk and increasing overall energy efficiency we work to improve your bottom line while maintaining your peace of mind.

We will evaluate your data center from micro-chip to utility service and provide you with a diagnostic report detailing:

- Overload issues
- HVAC and power inefficiencies
- Points of failure

## The Green Lane Design Optimization Diagnostic Report includes:

- Two Computational Fluid Dynamics (CFD) models, one outlining your current conditions and a second detailing solutions for optimization
- Air flow and critical power evaluations
- Recommendations for improving power and HVAC efficiency
- Rack and circuit breaker load analysis
- Road map for expansion



We pinpoint and eliminate hotspots. These elevations show the temperature drop resulting from our recommendations.

Our 3D CFD models are built from real data taken from our detailed survey of:

- Rack and circuit breaker loads
- Data center layouts
- Computer Room Air Conditioning (CRAC) unit settings
- Plenum obstructions
- Pass-through air openings

Because your data center is so critical, we ensure the accuracy of our models by comparing them to real world data points taken from:

- Bolometer readings of airflow through diffusers and registers
- Infrared readings of racks
- Meter readings from electrical equipment

## Additional Diagnostic Services

GLD provides additional services to help you maintain your data center, including:

- CFD analysis of failure scenarios, future layouts and expansions
- Conceptual designs for future IT growth expansions
- Unified single line drawings of all mission critical electrical equipment
- Up-to-date panel schedules and floor plans

