

Data Center Modernization to Enable Digital Transformation



Agenda

- Defining a **Smart Data Center**
- How should you **Spend Your Next \$1?**
- Fixing the **Basics**
- Where to **Optimize**
- Implementing **Automation & Control**
- **References & Resource**



How should you spend your next \$1?



OR



- *Typical extremes: Too much or not enough*
- *Non-integrated systems (different languages, standards, etc.)*
- *Simple Data, Smart People*

- *Need for site specific data (not case studies from other sites)*
- *Cloud based technology – fast, highly scalable, low cost*
- *Big Data driving Analytics creating actionable intelligence*



Fixing the Basics ...

Top 3 Fixes



Zombie Servers



Cloud Services



Mechanical Systems

Improve Performance



- ## Examples
- *“Rightsizing”*
 - *Firmware updates*
 - *Revisiting Maintenance Practices*
 - *Methods of Procedures*
 - *Unlocking Stranded Capacity (ex. 2N to N+1)*
 - *POD based deployments for targeted densities, availability*



Optimization

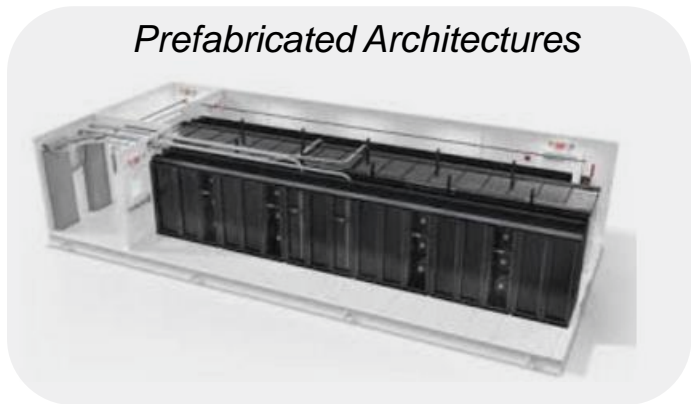


Capex based solutions introducing next generation technology to the Data Center

Examples:

- *Variable Speed “Everything”*
- *High Efficiency Systems (ex. energy, water, etc.)*
- *Modular, Scalable solutions (capacity on demand)*
- *Prefabricated architectures (embedded controls)*

Prefabricated Architectures



Considerations for using a Prefab architecture when modernizing:

1. *Predictable Efficiency*
2. *Portability*
3. *Accounting Benefits*
4. *Hedge against Uncertainty*
5. *Speed of Deployment*



Automate & Control



Top 5 Benefits of using a DCIM Solution

1. *Access Data Instantly*
2. *Make Informed Decisions*
3. *Operate More Efficiently*
4. *Share Information confidentially*
5. *Create Actionable Reports*

Ensure your investments pay off!



References & Resources

White papers

- ii [Improving Rack Cooling Performance Using Airflow Management™ Blanking Panels](#)
- iii [Facility Operations Maturity Model for Data Centers](#)
- iv [Reducing the Hidden Costs Associated with Upgrades of Data Center Power Capacity](#)
- v [Deploying High-Density Pods in a Low-Density Data Center](#)
- vi [Guidance on What to Do with an Older UPS](#)
- viii [Avoiding Costs from Oversizing Data Center and Network Room Infrastructure](#)
- x [Considerations for Owning versus Outsourcing Data Center Physical Infrastructure](#)
- xi [Determining the Power, Cooling, and Space Capacities when Consolidating Data Centers](#)

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