

Topeka Correctional Facility





Process

Topeka Women's Behavioral Health

Agenda

Welcome & Introduction

First Steps

Legislature Engagement

Funding Process

Design Process

Questions

First Steps

Define the program
The Funding Need
Paradigm Change



Topeka Women's Behavioral Health Legislature Engagement

Hearings
Education of the Need
Mission and Vision



Funding Process

Program Statement Defines Need
Bonds/Cash/Private Partnership
States Available Funds



Design Principles



Softer/Community-like: Use the concept of least restrictive environment to provide a more community like setting.



Access to Outdoor Space: Residents and staff should not only have a view to nature, but they should also be able to engage with it.



Visibility: Provide greater visibility and sight lines for staff and residents, thereby enhancing safety and security.



Leveraging Technology: Provide the technology backbone that not only supports current technologies, but future technologies as well.

Flexible: The design should allow for changes in treatment and operations, for both now and the future.



Enhanced Staff Amenities: The design should allow for ample resources and amenities for staff.



Support Teaming: The design should enhance and promote teaming among KDOC staff, as well as other community partners.



More Treatments and Therapies: The design should provide space for all current and future treatments and therapies.



Trauma Informed Design Principles



Safety: The foundation of trauma-informed design is creating a sense of physical and emotional safety. This includes clear wayfinding, secure spaces, and materials that promote calm.



Trustworthiness and Transparency: Open communication, clear signage, and predictable environments help build trust and reduce anxiety.



Empowerment and Choice: Providing choices in design elements, such as lighting, furniture, and layout, can give individuals a sense of control and agency.



Collaboration and Mutuality: Involving individuals who will use the space in the design process can ensure that their needs and preferences are considered.



Cultural Sensitivity: Recognizing and respecting diverse cultural backgrounds and experiences is crucial in creating inclusive and welcoming environments.

Connection to Nature: Access to natural light, views of nature, and natural materials can promote a sense of calm and well-being.



Stress Management: Design elements can be incorporated to minimize stress triggers and promote relaxation, such as using calming colors, reducing noise, and providing quiet spaces for reflection.



Personal Space and Privacy: Providing options for Personal space and privacy can help individuals feel more comfortable and in control.



Belonging & Community: Creating spaces for social interaction and connection can foster a sense of belonging and support.



Allow Hope: Meaning and purpose provide life with meaning. Provide spaces that allow for hope by Supporting creation of meaning and pursuit of purpose.



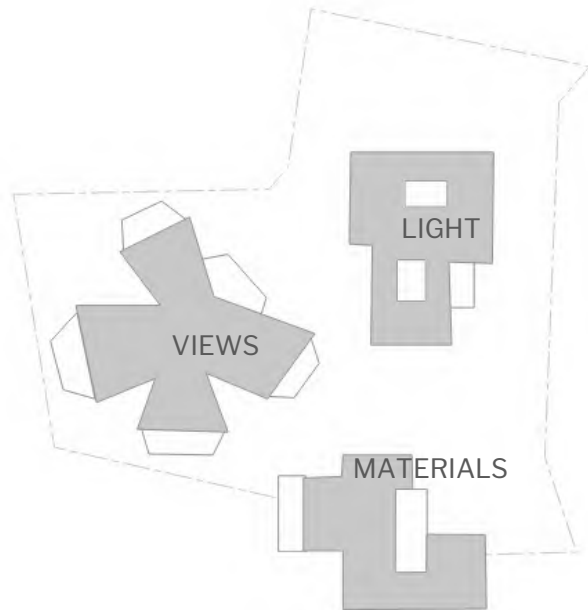
Topeka Women's Behavioral Health

Nature Inspired

Light: Circadian lighting reduces stress and supports healthy sleep and restoration.

Materials: Touch is connective. Natural Materials with texture to be touched create presence and calming.

View: Provide views to sky, natural settings, and to the horizon. Views of the horizon are critical to passage of time while views of the sky and natural setting are calming and restorative.



Women's – Behavioral Health Facility

Interviews, Workshops, Site Plan, Administration Building Entrance



General Visitation and Family Visitation WALC (Women's Activity Learning Center)



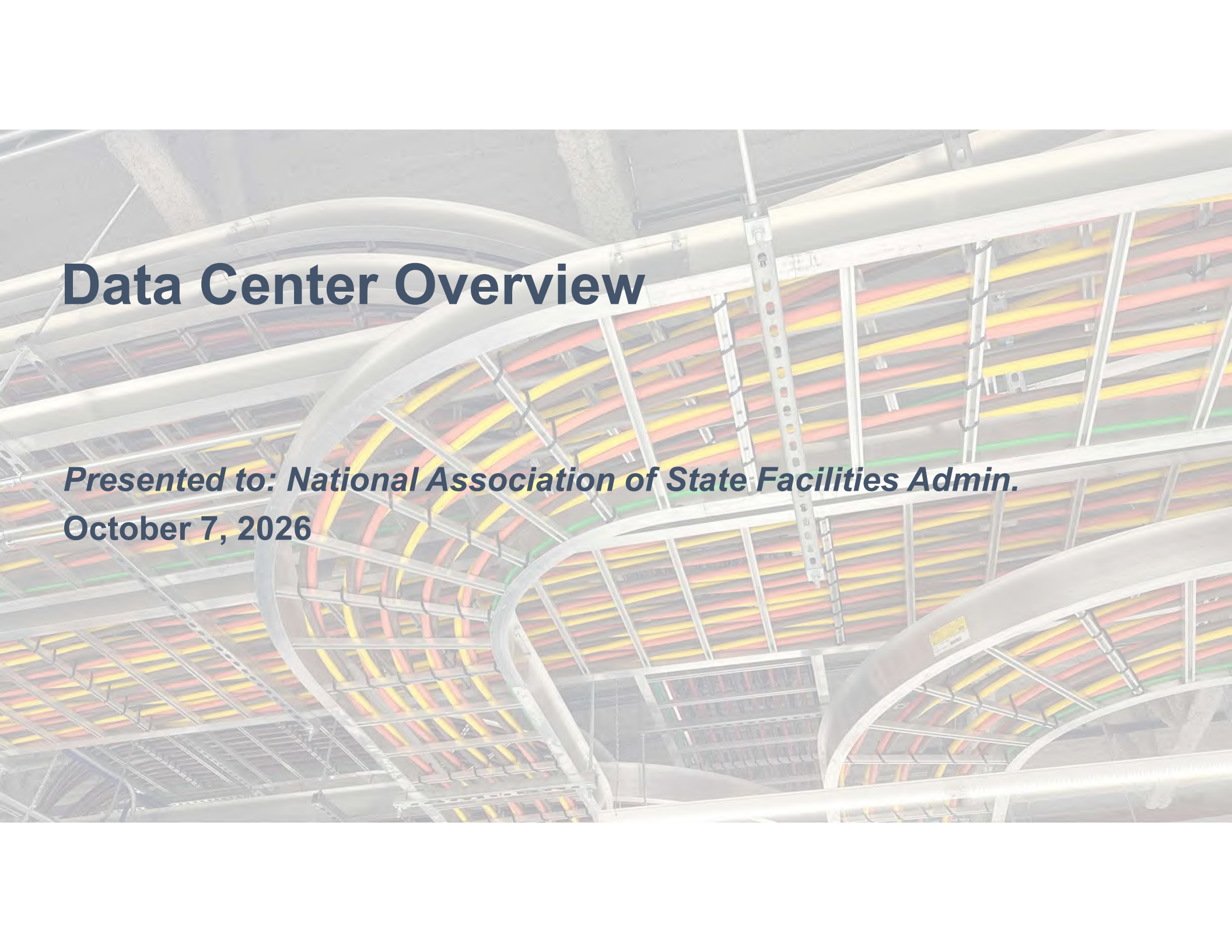
Behavioral Health Housing

Program Classroom, Central
Garden, Sleeping Unit,
Dayroom and Patio



Topeka Correctional Facility





Data Center Overview

***Presented to: National Association of State Facilities Admin.
October 7, 2026***

Data Center Overview



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Partner // Mechanical Engineer

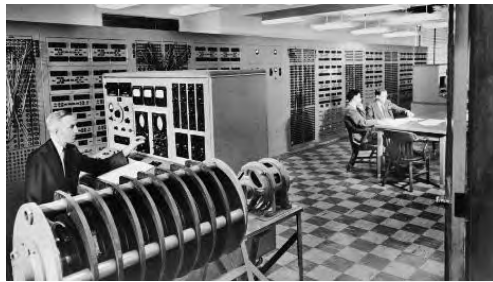
24 years of Data Center Design & Commissioning

MN AFCOM Chapter VP



Data Center Overview

Just a room full of computers



Data Center Overview

Data Center Sizes / Types

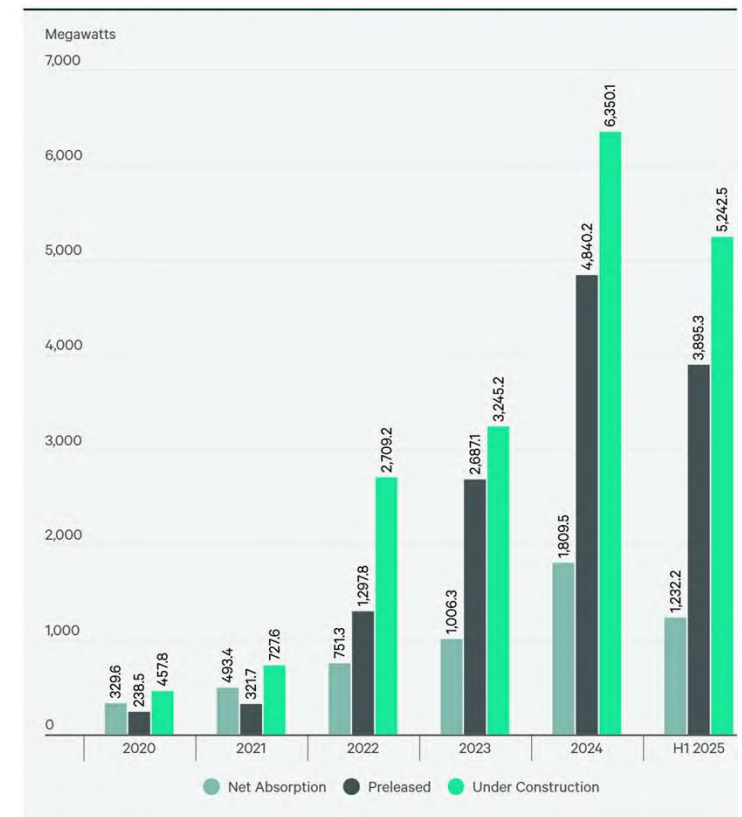
Types

- Enterprise
- Colocation
- Edge
- Hyperscale

Growth Rate

- 2000 - 1 MW
- 2010 – 10 MW
- 2024 – 100 MW+

Figure 5: Primary Markets Net Absorption, Preleasing & Under Construction



Source: CBRE Research, CBRE Data Center Solutions, H1 2025.

Data Center Overview

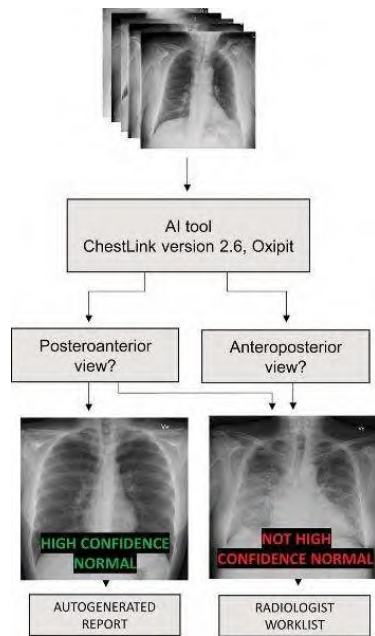
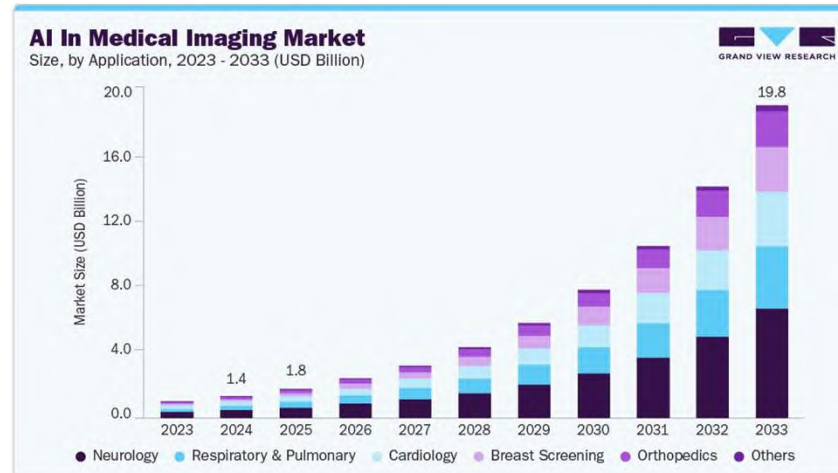
What uses a data center?



- Outages - 911 calls, Retail, Internet connectivity for business
- Security - Health Records, Financial, School Records, Photos
- Speed and Accuracy – Banking , Stock Market, Favorite Show!

Data Center Overview

Artificial Intelligence – Data Center Impact



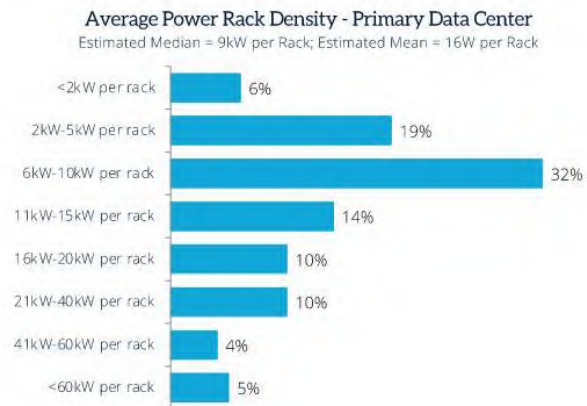
Genetically Modified
90 day test to 90 sec

Data Center Overview

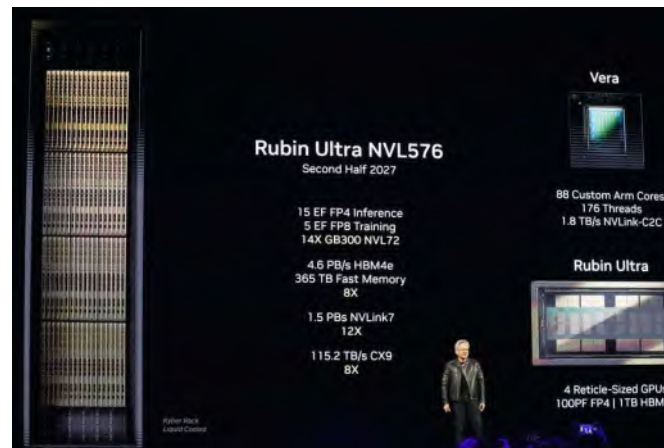
Artificial Intelligence Impact

- 1 Google search:
~ 100W light bulb - 10 seconds
- 1 Chat GPT search ~ 100 times that

AFCOM 2025 State of the Data Center Report



DATA CENTER WORLD
DataCenter Knowledge



Nvidia roadmap Rubin Kyber 600 kW / rack

~800 homes

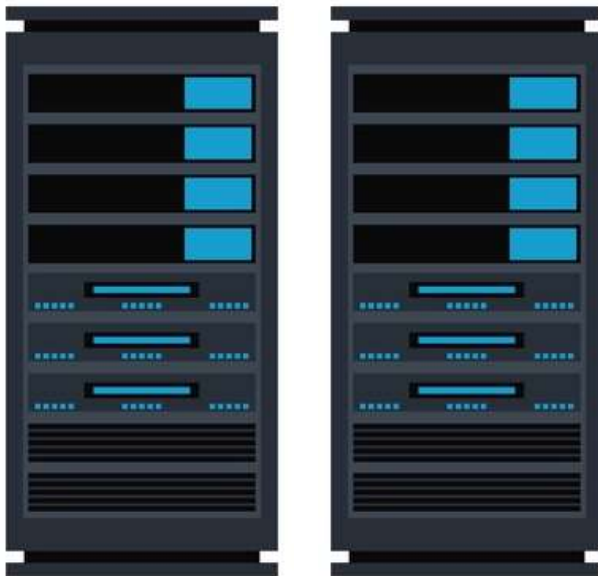


Project Descartes CDU: 4th gen in deployment, 5th gen in concept

Google 1MW Rack
(cloud.google.com)

Data Center Overview

What supports a Data Center?



Building



Power



Cooling



Internet /
Cabling



IT

Data Center Overview

Today's Typical Campus Plans



Image: datacenters.microsoft.com



Image: datacenters.atMeta.com



Image: meta.com

Data Center Overview

Generators



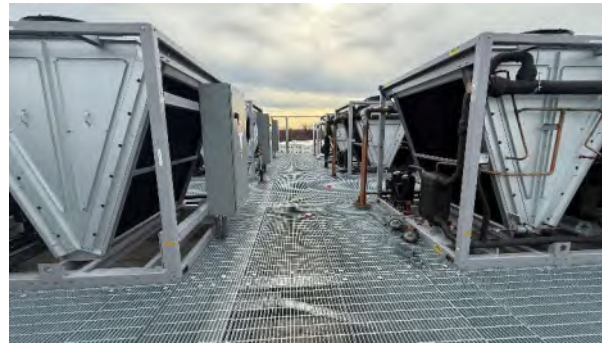
- Interior / Exterior
- Diesel
 - 24 / 48 Hour Backup
- Natural Gas
- Connections
 - Temp. Gen.
 - Load Banks
- Sound Attenuation

UPS Systems



- Uninterruptable Power Supply (UPS)
- Battery Run Time
 - 5-10 minutes
- Battery Types
 - Li-Ion
 - VRLA, Ni-Zinc, Ni-Cad, Wet Cell

Central Chiller Plant vs Stand Alone



- Central Chiller Plant
 - Water Cooled Chiller
 - Air Cooled Chiller
- Dry Coolers
- Evap Cooling Tower
- Hybrid Adiabatic

Data Center Overview

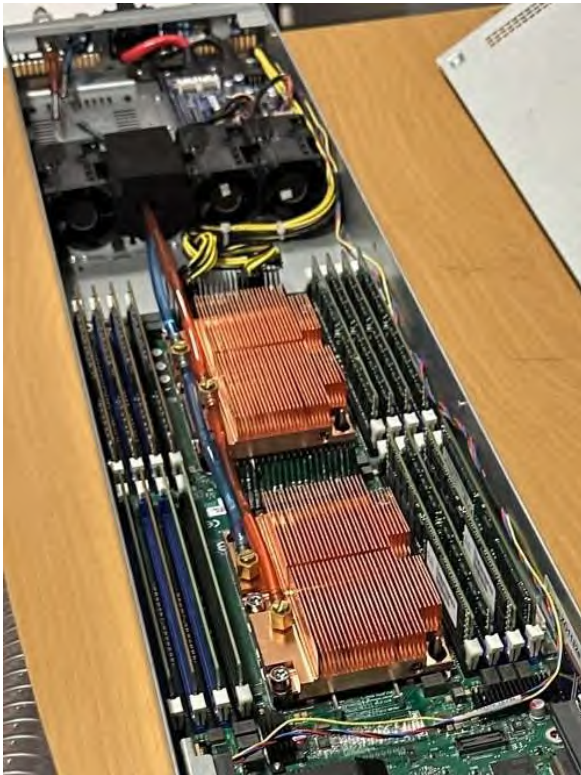
Data Hall Cooling - Airside



- Perimeter CRAC / CRAHs
- Fan Wall Units
- Exterior Sidewall AHUs

Data Center Overview

Data Hall Cooling – Liquid



- CDU-Cabinet Distribution Unit
 - Direct to Chip Cooling
- Immersion Cooling

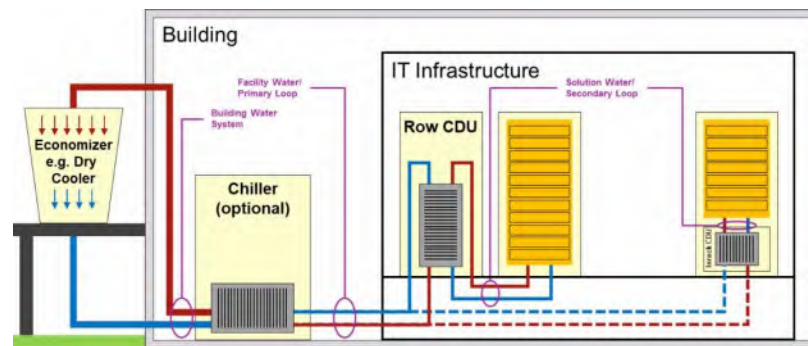


Image:
ASHRAE TC9.9

Recent Challenges

- Speed to Market
- Long Lead Equipment
- Future Proofing
- Modularity
- **POWER!!!**



Recent Concerns – Energy Usage



- Always Increasing Energy Efficiencies
- Renewable Energy Deployments
- Green Grid – founded in 2007
 - Defined Power Usage Effectiveness (PUE)
 - Defined Water Usage Effectiveness (WUE)

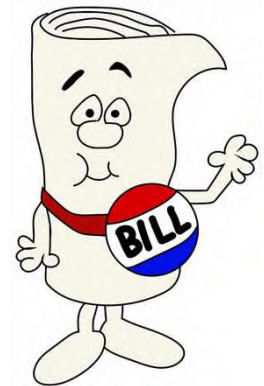


$$\text{PUE} = \frac{\text{TOTAL FACILITY ENERGY}}{\text{IT EQUIPMENT ENERGY}}$$

Recent Concerns – Energy Costs



- 2025 MN law HF16/SF1499
 - Requires large data centers to pay full cost of electric service
 - Data center sizes determined by Public Utilities Commission (PUC)



Recent Concerns – Water Usage

- Cooling Technology Options
 - Evaporative Cooling ~15 gpm / MW peak
 - 1MW ~ 5 million gal/yr in MN
 - ~10% more energy efficient (water at power plant)
 - Closed Loop = NO makeup water
- Average home of 4 ~ 150,000 gal / yr
- Carwash ~ 800,000 gal/yr (with reclaim)
- 1 Acre of corn ~ 600,000 gal/yr (USDA)
- Golf Course - Midwest ~ 35 million gal/yr (USGA)



Recent Concerns - Toxins



- Closed Loop System
 - Filled only once
 - Not discharged from site
- Propylene Glycol / Water Mix
 - Food Grade – salad dressings, cake mixes, cosmetics, dog food, etc.
 - Prevents Freezing



Recent Concerns – Noise

- IT Equipment Noise
 - Far within concrete building
- Generators – Emergency use only
 - Sound Attenuation
- Cooling Equipment
 - Sound Dampening Fans
- Equipment yard walls
- Earth Berms, Setbacks

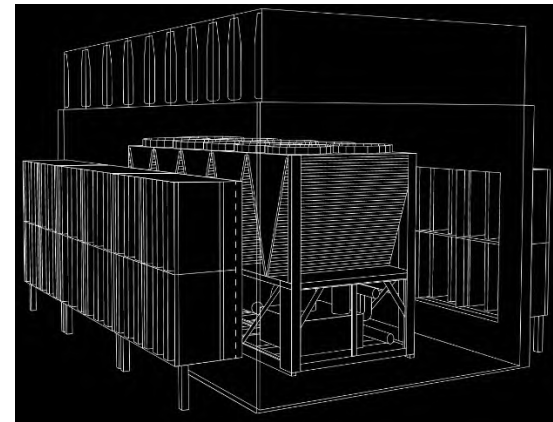


Image: Vibro Acoustics



Recent Concerns – Pollution



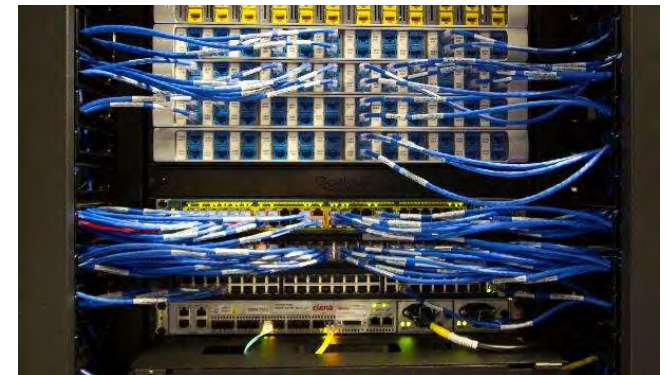
- Emergency Generators
 - Used just like Hospitals
 - only during utility outage
 - Testing one hour per month
 - Meets EPA requirements
- Light Pollution
 - Site designed for 1 foot candle for safety
 - Gas Station Fueling Area – 20 foot candles



Recent Concerns – Traffic



- Construction Traffic ~1,000 peak per building
 - Roadway upgrades
- Once built, box truck deliveries of:
 - IT equipment
 - Maintenance materials
- Employees 24/7



Recent Concerns – Jobs for Local Area



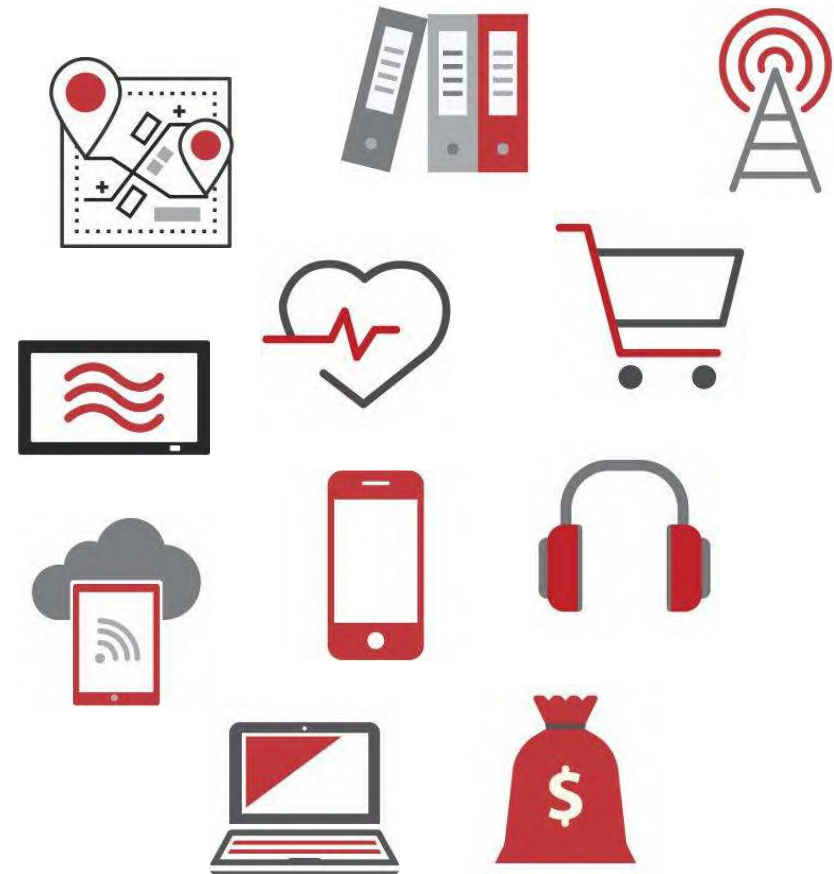
- Trades jobs during ~24-month construction per building
- Highly skilled IT workforce
- Trades jobs to maintain MEP equipment



Data Center Overview

Take aways

- Data Centers are behind every business
- Technology Growing
 - AI will require more
- Huge Taxpayer
- Great Jobs
- Concerns are Manageable



Data Center Overview

October 7, 2026



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