

Technology Rooms Gone Bad

(and how to make them good)

You may know them as MDFs, IDFs, or by some other acronym.

Whatever you call them, the spaces dedicated to **housing IT equipment** are among the most important in your district to maintain digital connectivity among and between IP-based systems including security, instructional, and wireless access.

If your district's Technology Rooms (TRs) are in disarray, there's a good chance that critical infrastructure behind the walls—cables and pathways—is in equally poor shape.

These conditions can also cause operational issues (e.g., intermittent errors) with existing and newly installed technology systems.

12-Point Checklist for Healthy IT Equipment Spaces

1. Size with 3' clear space front and back
2. Environment/location/hallway access
3. Secure/dedicated space or locked cabinet
4. Environmental controls
5. Dedicated and redundant power
6. Uninterruptible Power Source (UPS)/ Emergency Management (EM) power
7. Grounding infrastructure
8. Division 27 fit-out including overhead cable management and fire-retardant plywood
9. Cable termination and management
10. Room construction with walls extended to deck, and compliant, sealed cable penetrations
11. Vinyl-Coated Tile (VCT) flooring
12. Ceiling open to deck with min. height of 10'

A Technology Room with Extremely Poor Conditions

[2] Overhead utility pipes leave racks susceptible to damage from leaks/bursts.

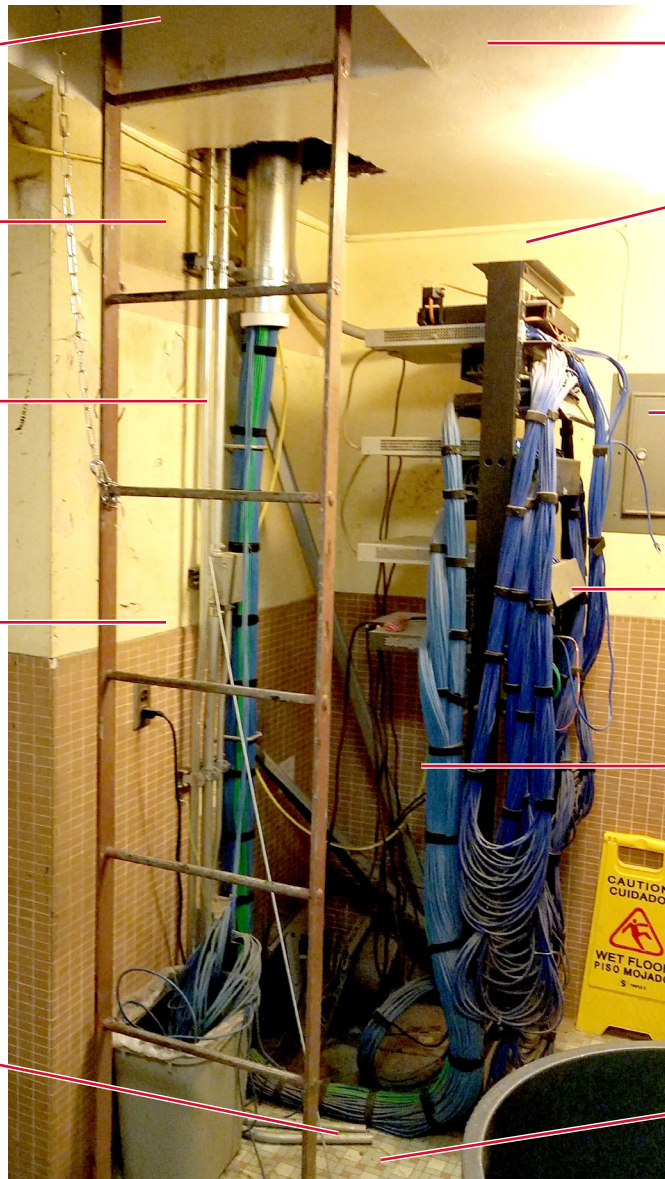
[10] Poor room construction with no deck access and poor cable penetrations.

[7] Lack of grounding infrastructure increases risk of electrical shortage and equipment damage.

[3] Unsecured, shared space creates a security risk as well as possible accidental damage.

[6] Lack of Uninterruptible Power Supply (UPS) or emergency power source.

[2] Dirty, dusty environment increases risk of operating issues with rack components.



[12] Hard ceiling inhibits inspection and serviceability.

[8] No Division 17 fit out without proper overhead cable management increases likelihood of cable damage.

[5] No independent power circuit increases likelihood of power outage or failure.

[9] No vertical cable management makes troubleshooting difficult.

[1] Inadequate rack clearances inhibit serviceability.

[4] No environmental controls increases risk of equipment overheating.

[11] Floor tile is not anti-static increasing risk of Electro-Static Discharge.



Picturing a Technology Room with Good Conditions

Now that you know what a poor Technology Room looks like, you can appreciate how a TR that follows industry best practices should appear as shown below.

Meeting these and other TR best practices requires careful planning, coordination, and oversight but the increased reliability and scalability of your technology infrastructure will pay dividends in the years ahead.

[2] Environment/location.
Provides hallway access without any overhead utility pipes.

[3] Security. Secure or dedicated space, or locked cabinet.

[4] Environmental control.
Independent controls in same room.

[7] Grounding infrastructure.
Telecommunications Grounding Busbar (TGB) is installed.

[6] UPS/EM Power.
Uninterruptible Power Supply and/or Emergency Power source.

[1] Room size. Allows rack front and back clearances.



[12] Ceiling. Open to deck with 10' minimum height

[8] Division 27 fit out.
Overhead (horizontal) cable management and fire-resistant plywood wall.

[9] Cable Termination and Management. Adequate racks/cabinets and cable management

[10] Room construction.
Walls extend to deck. Cable penetrations are compliant and sealed (fire stopped).

[5] Power. Dedicated circuit with circuit ID labels.

[11] VCT flooring.
Anti-static tile.

Perform a TR Snap Inspection in less than 5 Minutes

If you'd like to observe the technology conditions of the IT equipment space that's nearest to you, please view our [TR Snap Inspection Form](#) in PDF format.

If you need additional assistance in assessing your district's technology conditions, please [visit our website](#) or call **585.286.4500** to discuss your needs.

