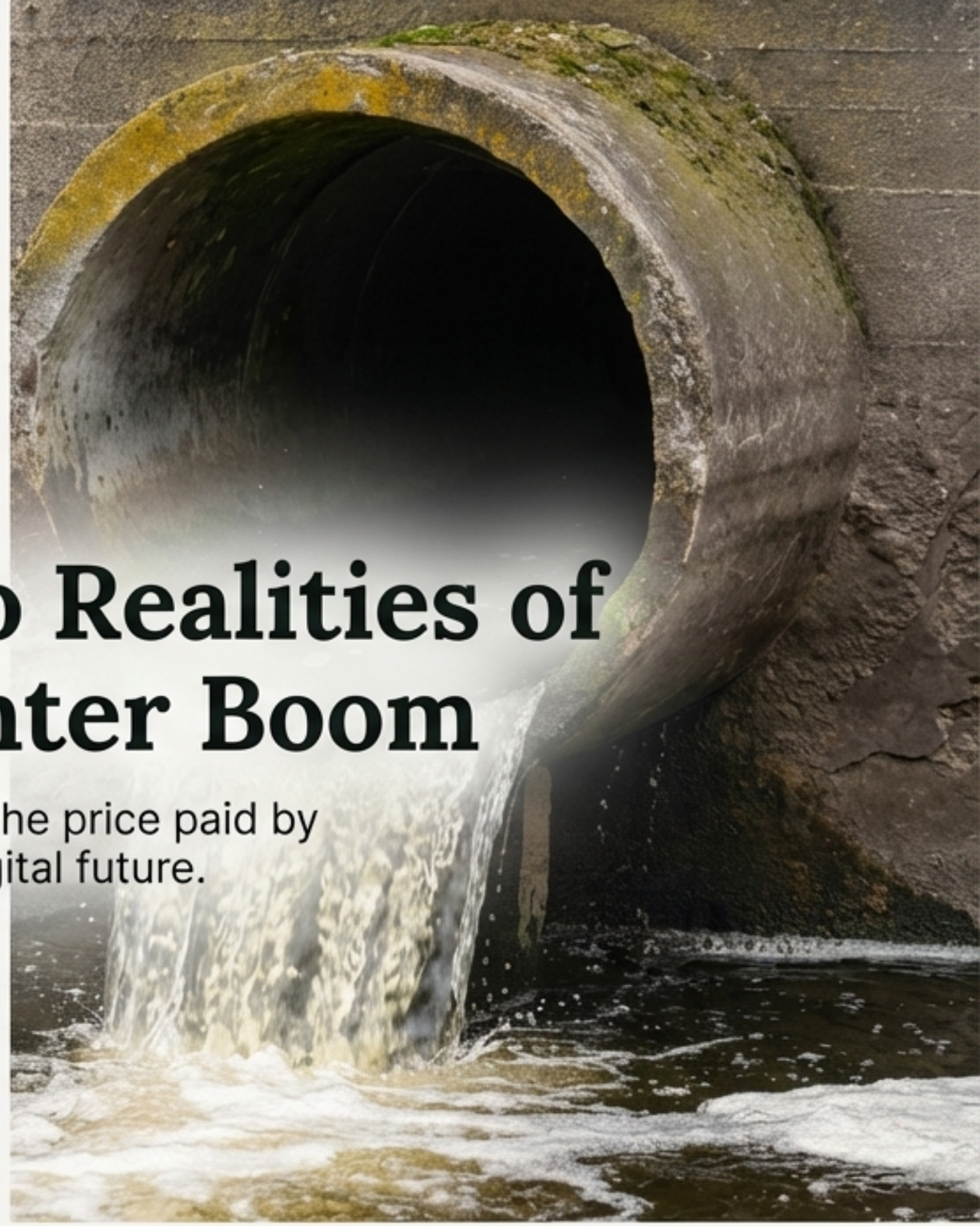
# AI Eats First: The Two Realities of America's Data Center Boom

Exploring the promise of progress and the price paid by the communities powering our digital future.



# “This was my perfect spot before. But it isn’t anymore.”

The story of a Georgia resident living next to a new data center construction site, as reported by the BBC, brings the abstract problem of the AI boom into sharp focus. Her well water turned brown. Her toilet required a bucket to flush. A loud construction alarm blared constantly.

This is not an isolated incident. As demand for AI surges, data centers are moving into rural areas, transforming farmland into server farms and leaving communities to shoulder the externalities.

Source: Platocom blog, citing BBC World Service.

# The Narrative of Progress: Jobs, Investment, and Local Revenue

The industry presents a compelling case for the economic benefits data centers bring to rural communities, citing data from the Washington Technology Industry Association (WTIA) report on rural Washington.

## Jobs

Data centers have supported long-term job growth in construction and skilled trades.

**Construction & Capital Investment**
(Annual Avg. 2017-2021)

**5,290** jobs

**$370M** in wages & benefits

**Ongoing Operations**
(Annual Avg. 2017-2021)

**760** full-time jobs

nearly **$70M** in annual wages & benefits

## Tax Revenue (2017-2021)

Data centers are "fiscal donors," paying more in taxes than they consume in public services.

**$238.5 Million**
in state property, sales, and utility taxes.

**$95.4 Million**
in local taxes supporting schools, hospitals, and fire departments.

In Grant County, data centers account for over 20% of property tax revenue.

# The Narrative of Strain: Resource Depletion and Shifting Burdens

## Ineffective Tax Incentives

Tax breaks often fail to deliver promised benefits, with costs to taxpayers per job sometimes exceeding $1 million.

"I can't think of a site selection or placement decision that was decided on a set of tax incentives." - Microsoft Executive (UMich)

**Proposed tax breaks in Genesee County, Alabama amount to $838,000 per job.**" (UMich)

Tax exemptions reduce funding for local services like the Caledonia Community Schools in Michigan." (UMich)

## Increased Utility Rates

The costs of massive grid upgrades are passed directly to residents.

Residential electricity rates in Michigan **increased by 25% since** the Switch data center was built and are **17% higher than the national average.**" (UMich)

Data centers often negotiate lower bulk power rates (PPAs), shifting the financial burden to other customers." (UMich)

# The Economic Equation: High-Paying Jobs or High-Cost Subsidies?

## The Promise

In rural Washington, data centers supported **almost 5,300 construction jobs** and **760 operations jobs** annually (2017-2021). (WTIA)

**$333.9 million** in state and local taxes paid (2017–2021), funding schools, hospitals, and vital services. (WTIA)

## The Reality

The jobs created are typically low-wage, non-technical positions (security, maintenance) often filled by contractors **without benefits or job security**. (UMich)

Tax breaks in Washington State have **cost over $300 million in forgone revenue**, while the local fire department in Quincy struggles to replace outdated equipment. (UMich)

> *The high subsidies... serve only to boost corporate profits rather than provide meaningful economic benefits to the local community. (UMich)*

# An Insatiable Thirst: The True Power and Water Cost of AI

## The Pledges

amazon

Corporate initiatives like Amazon's pledge to be "water positive" by 2030 and investments in watershed restoration signal a commitment to sustainability. Companies are also piloting more efficient cooling technologies like recycled water systems.

## The Consumption Reality

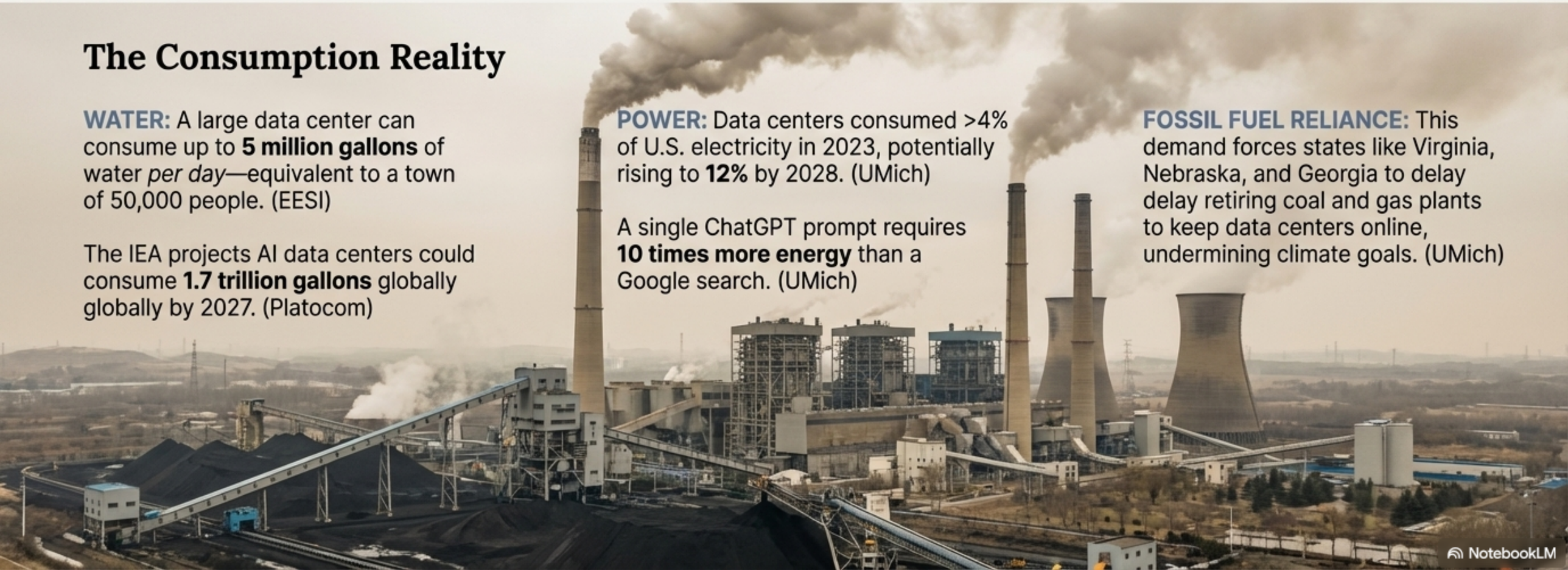
**WATER:** A large data center can consume up to **5 million gallons** of water *per day*—equivalent to a town of 50,000 people. (EESI)

The IEA projects AI data centers could consume **1.7 trillion gallons** globally globally by 2027. (Platocom)

**POWER:** Data centers consumed >4% of U.S. electricity in 2023, potentially rising to **12%** by 2028. (UMich)

A single ChatGPT prompt requires **10 times more energy** than a Google search. (UMich)

**FOSSIL FUEL RELIANCE:** This demand forces states like Virginia, Nebraska, and Georgia to delay delay retiring coal and gas plants to keep data centers online, undermining climate goals. (UMich)



# The Governance Gap: Expecting Local Clerks to Solve a National Challenge



## The Core Problem

Local governments are being overwhelmed by decisions **they are not prepared to make.** There are no standardized mechanisms for small towns to report infrastructure stress to state or federal agencies.

> **Key Analogy:** "Can a local clerk set the value of the U.S. dollar? Of course not—yet we're asking local officials to make decisions with national implications, without the tools, data, or policy frameworks to guide them." (Platocom)

## The Consequence

Citizen groups and non-profits are stepping in where regulation falls short.

**Example:** In Georgia, the Chattahoochee Riverkeeper organization is conducting its own water quality testing near data center sites, finding signs of pollution runoff and heavy sediment loads that official oversight misses. (Platocom)

# An Unsustainable Equation


**The current model—which pits economic promises against community well-being and environmental health—is fundamentally broken. The hidden costs are becoming undeniable.**

We need a **new blueprint** for our digital nation. One that fosters technological progress while demanding accountability, ensuring that the infrastructure of the future doesn't sacrifice the communities that host it.

## The Path Forward

1. Policy & Accountability
2. Technological Innovation
3. Full Lifecycle Responsibility

# A Blueprint for Accountability: Smarter Policy for a Digital Age

## Mandate Transparency

Require mandatory environmental impact audits before permits are granted. Mandate public disclosures of water and power usage for all large data centers. (Platocom, UMich/CA SB 222)

## Adopt Proven Models

Implement a framework like the German Energy Efficiency Act, which mandates energy audits, strict performance standards, and renewable energy use. (UMich)

## Ensure True Renewables

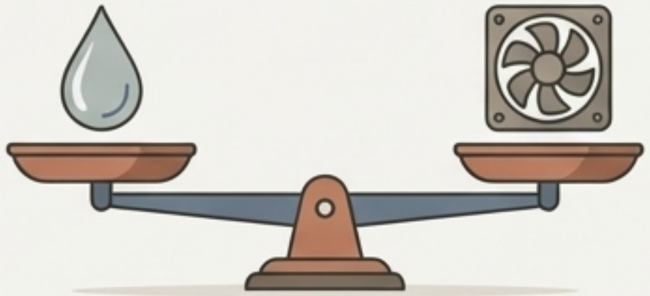
Include a “renewable energy additionality” clause in any incentive package, requiring data centers to fund *new* renewable capacity rather than consuming existing resources. (UMich)

## Protect Ratepayers

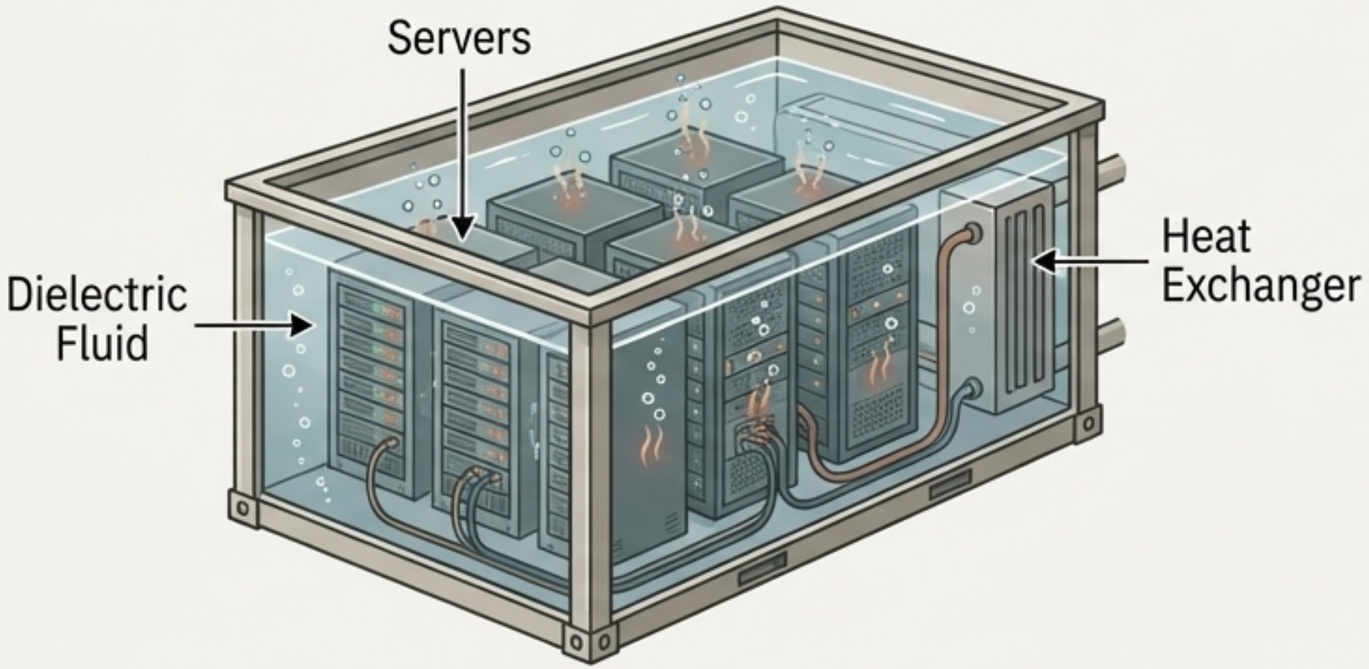
Prohibit utilities from passing the costs of data center infrastructure upgrades on to other residential and business customers (as proposed in Virginia’s SB1234). (UMich)

# A Blueprint for Innovation: Engineering More Efficient Infrastructure

**Water-Cooled:** Energy-efficient but highly water-intensive. (UMich)



**Air-Cooled:** Uses less water but consumes more electricity. (UMich)




## Direct-to-Chip & Immersion Cooling

Use specialized **dielectric fluids** to cool components directly, **significantly reducing water consumption** and **improving energy efficiency**. Compare this to the difference between drip irrigation and flood irrigation in agriculture. (EESI)

Other innovations include **Closed-Loop & Free Cooling,** which reuse water or use cold outside air to reduce energy demand. (EESI)

**Policy should actively incentivize the shift to these low-water and low-energy cooling technologies.** (Platocom)

# A Blueprint for Responsibility: Beyond Operations to End-of-Life

**The Overlooked Stage:** The lifecycle of a data center doesn't end when it's operational. What happens when servers, storage systems, and networking devices become obsolete?

**Environmental Impact:** E-waste is one of the world's fastest-growing waste streams, containing hazardous materials like lead and mercury. (Secure ITAD)

**Introducing IT Asset Disposition (ITAD):** The process of securely managing IT hardware when it is no longer needed.

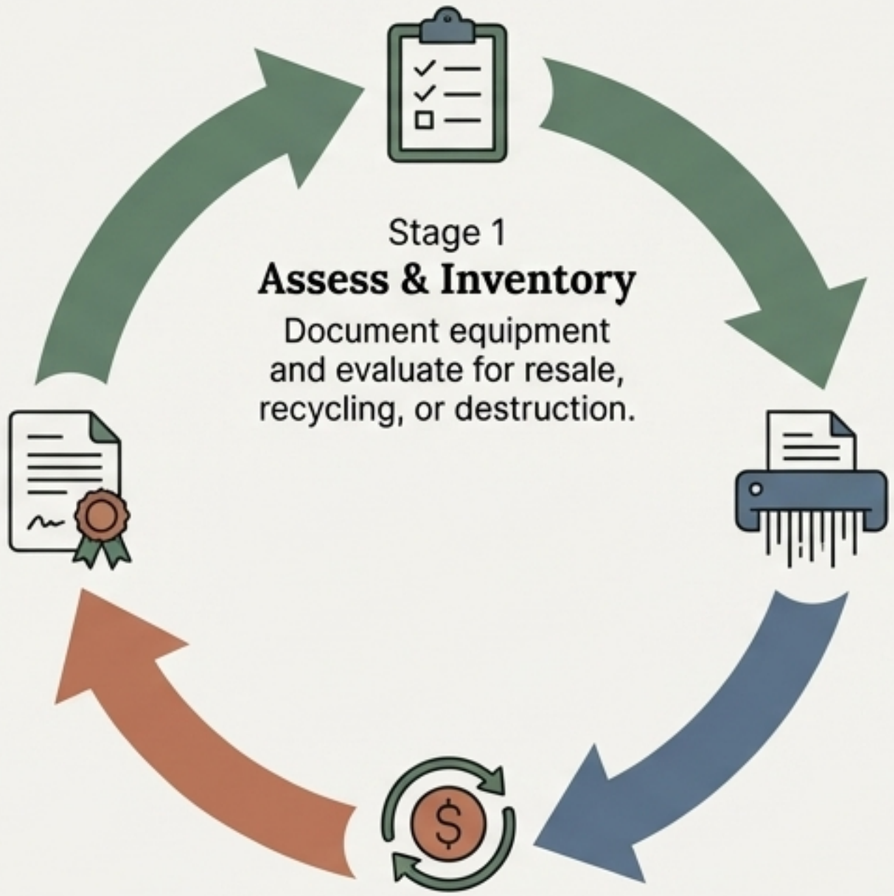
## Why It Matters

**Data Security:** Improper disposal creates massive security risks.

In 2020, Morgan Stanley was fined $60 million by US regulators for auctioning off unwiped hard drives containing sensitive client data. (Secure ITAD)

**Regulatory Compliance:** ITAD ensures compliance with laws like GDPR (data erasure) and WEEE (e-waste). (Secure ITAD)

# From Linear Waste to a Circular Economy



Stage 1
**Assess & Inventory**
Document equipment and evaluate for resale, recycling, or destruction.

Stage 2
**Secure Data Destruction**
Permanently erase data via software, degaussing, or physical shredding.

Stage 3
**Recycle & Remarket**
Recover valuable materials and refurbish equipment for resale.

(Secure ITAD)

Stage 4
**Compliance & Documentation**
Provide Certificate of Destruction and Chain of Custody records.

## The Impact in Practice

Sims Lifecycle Services (SLS) demonstrates the success of this circular model.

**8.8 Million**
repurposed units processed in FY25

**44.3%**
increase year-over-year

This growth is driven by rising AI adoption and hyperscaler data center expansion, creating a massive market for repurposed IT components. (Sims Limited Report)

# Redefining Progress for a Digital Nation

## The Blueprint for Sustainable AI Infrastructure:

**Accountability:** Mandate transparency and adopt proven policy frameworks.

**Innovation:** Incentivize and deploy next-generation cooling and efficiency technologies.

**Responsibility:** Embrace full lifecycle management and the circular economy.

**"Sustainability is not just about emissions—it's about ensuring that the future of AI doesn't sacrifice the stability, safety, or sovereignty of the communities that support it. This is especially critical when 42 million Americans, mostly in rural areas, still lack access to the internet in their homes."** (Platocom)