NATIONAL ASSOCIATION of COUNTIES NACo

Desktop and Device Strategy:

Responding to PC Supply Chain Challenges

Executive Summary

County governments rely on large fleets of computers to support daily operations and deliver essential services to residents. These systems support public safety, financial management, permitting, health and human services, and other core functions.

In recent years, global supply chain disruptions have made computer procurement less predictable. Shortages of key components, shipping delays and increased demand have affected delivery timelines and, in some cases, increased costs for enterprise computer equipment.

Because counties often manage thousands of devices, these disruptions can affect hardware replacement cycles and long-term technology planning. As supply chain conditions continue to evolve, counties are evaluating how to maintain reliable service delivery while managing costs and long-term technology investments.

Key Takeaway

Counties are increasingly adopting hybrid device strategies that combine desktops, laptops and virtual desktop technologies to improve flexibility, manage costs and strengthen operational resilience.

Why This Matters for Counties

County departments depend on reliable computing systems to deliver services to residents, including public safety, health and human services, courts, finance, public works and planning.

When device availability or performance is constrained, it can directly affect timelines, responsiveness and the quality of services residents receive.

Most counties follow a hardware refresh cycle of approximately three to five years. When supply shortages occur, replacing aging equipment becomes more difficult.

A clear device strategy helps counties manage procurement challenges while maintaining productivity, service delivery and predictable budgeting.

What Counties are Seeing

- Increasing shift toward hybrid desktop and laptop environments
- Greater reliance on Software as a Service (SaaS) and browser-based applications
- Early exploration of virtual desktop pilots
- Re-evaluation of device standards and refresh cycles

Decision Points for County Leadership

County leaders reviewing device strategy may want to consider several key questions:

- Should the county maintain current desktop and laptop refresh cycles, or extend device lifespans to manage supply risks?
- Should hardware standards be adjusted to balance performance and procurement costs?
- Does extended warranty coverage continue to provide sufficient value?
- Are there opportunities to pilot virtual desktop technologies to reduce reliance on full workstation devices?
- How can device procurement strategies align with the increasing shift toward cloud and SaaS applications?

County Device Strategy Options

Counties typically deploy computers using one of three general approaches, with many shifting toward hybrid models based on workforce needs.

Strategy	Description	Typical Use
Desktop focused	Most employees use stationary desktop computers	Administrative offices and fixed workstations
Laptop focused	Most employees receive laptop computers	Remote work, field staff, management roles
Hybrid model	Mix of desktops and laptops based on job requirements	Increasingly common across county IT environments

Many counties are also exploring virtual desktop environments, which allow users to access their workspace through lightweight endpoint devices connected to centralized infrastructure.

Device Comparison

Factor	Desktop Computers	Laptop Computers
Cost per device	Lower	Higher
Typical replacement cycle	4 to 5 years	3 to 4 years
Upgrade flexibility	High	Limited
Mobility	None	High
Energy use	Higher	Lower
Repairability	Easier	More complex
Risk of loss or theft	Low	Higher

Configuration Standards and Hardware Planning

Hardware configuration standards should be periodically reviewed to ensure devices align with actual workload requirements.

Typical county workloads include browser-based applications, Microsoft 365, SaaS systems and video conferencing tools.

Many counties find that 16 GB of RAM meets the needs of most administrative roles. Devices with 32 GB of RAM may benefit GIS, engineering, data analysis and heavy multitasking environments, particularly where longer device lifecycles are expected.

Additional memory typically increases device cost by about $120 to $250 per system, depending on vendor pricing, hardware platform and procurement contracts. Recent economic trends have pushed these costs significantly higher, in some cases doubling or tripling.

A tiered configuration model often provides a practical balance between cost and performance.

User Category	Recommended Configuration
Administrative staff	Standard configuration with 16 GB RAM
Supervisors and heavy multitask users	Enhanced configuration with 32 GB RAM
GIS and technical roles	High-performance workstation configuration

As more applications move to SaaS and cloud environments, some counties are also evaluating whether all users require full local computing power.

Hardware Support and Warranty Planning

Many counties purchase extended support coverage aligned with device lifecycles. These agreements typically add approximately $250 to $300 per device.

Benefits may include predictable repair coverage, faster service and reduced internal IT workload.

Counties may benefit from reviewing whether current support standards consistently deliver value, particularly when compared with maintaining a small inventory of spare devices.

Virtual Desktop and Thin Client Options

Some counties are beginning to explore virtual desktop environments, including platforms such as Azure Virtual Desktop.

In these models, computing tasks run in centralized infrastructure, while users access their workspace through lightweight devices.

This approach aligns with the continued shift toward SaaS, browser-based applications and cloud-hosted services.

Potential benefits include:

- Longer endpoint lifecycles
- Simplified device management
- Centralized security controls
- Reduced dependence on traditional PC supply chains

Virtual desktop environments are not suitable for all workloads. High-performance or offline use cases may still require traditional devices. As a result, many counties view this approach as a complement rather than a replacement.

Targeted pilot programs can help determine where these models are most effective.

Fiscal Considerations

Device strategy decisions carry both immediate and long-term budget implications for counties.

Upfront procurement costs can vary significantly, with desktop computers generally costing less than comparable laptops. Over time, lifecycle costs also differ, as desktop components can often be upgraded to extend usability, while laptops are more likely to require full replacement at the end of their lifecycle.

Energy use is another factor, as laptops and thin client devices may reduce ongoing power consumption compared to traditional desktops. At the same time, laptop deployments can introduce additional costs for accessories such as docking stations and external monitors.

For counties exploring virtual desktop environments, potential savings in endpoint devices should be weighed against new infrastructure costs, including cloud services, storage, networking and licensing. A comprehensive view of total cost of ownership is essential when evaluating these options.

Implementation Considerations

Many counties can transition device strategies gradually by aligning changes with existing replacement cycles rather than pursuing large-scale, one-time shifts.

This often begins with policy development, where counties establish device standards, align device types to specific roles and review whether current configuration and support models match actual operational needs.

From there, procurement practices can be refined by standardizing hardware models, expanding vendor options and coordinating purchases across departments to improve consistency and cost efficiency.

Over time, counties can implement changes through a phased transition. Devices are replaced during normal refresh cycles,

mobility is expanded where it supports workforce needs, and high-performance systems are maintained for specialized roles.

Some counties can also begin piloting virtual desktop solutions in targeted areas to evaluate long-term viability before broader adoption.

Risk Considerations

As counties adjust device strategies, several risks should be considered:

- Supply chain uncertainty may continue to affect hardware availability; vendor diversification and flexibility are important.
- Increased use of mobile devices can introduce cybersecurity risks, requiring safeguards such as encryption, device management and multi-factor authentication.
- Workforce adjustment is a factor, as employees may need time and support to adapt to new devices and workflows.
- Aligning device configurations with actual workload requirements remains critical; overbuilt systems can drive unnecessary costs, while underpowered devices can hinder productivity and service delivery.

Considerations for County Technology Leaders

County CIOs and IT leaders are increasingly taking a comprehensive view of device strategy as part of broader technology planning.

This includes reviewing hardware replacement schedules, procurement approaches and device configuration standards,

as well as identifying opportunities to extend device lifecycles where appropriate.

Leaders are also considering workforce mobility needs, energy and sustainability goals, and whether current support models continue to deliver value.

In addition, many counties are exploring targeted pilot opportunities for virtual desktop environments to better understand how these approaches may fit into their long-term strategy.

Considerations for Elected Leaders

For elected officials, device strategy decisions are less about technology and more about how counties deliver services efficiently, responsibly and reliably to residents. Key considerations include:

- **Service continuity.** Reliable computing infrastructure underpins critical county functions, from public safety to health and human services. Delays in device replacement or performance issues can affect timelines, responsiveness and overall service quality.
- **Fiscal stewardship.** Device strategy choices influence both upfront and long-term costs, including procurement, maintenance, energy use and potential investments in cloud or virtual infrastructure. Leaders may want to understand how different approaches affect total cost of ownership over time, rather than focusing solely on initial purchase price.
- **Workforce effectiveness and flexibility.** As counties continue to support hybrid and field-based work, device strategies can impact employee productivity, recruitment and retention.

- **Risk management.** Supply chain disruptions, cybersecurity risks, and reliance on aging equipment can all introduce operational vulnerabilities. A balanced device strategy can help mitigate these risks while maintaining stability.
- Alignment with long-term strategic priorities, including digital service delivery, modernization efforts, and sustainability goals.

Conclusion

Supply chain challenges affecting computer hardware have underscored the need for more flexible, resilient approaches to technology planning in county government.

Counties are responding by rethinking traditional device models and aligning technology decisions more closely with workforce needs, service delivery priorities and long-term fiscal considerations.

Hybrid device strategies, combined with the thoughtful evaluation of emerging options such as virtual desktops, provide a practical path forward.

As counties continue to modernize operations and expand digital services, device strategy will play an increasingly important role in supporting efficiency, continuity and responsiveness.

By taking a deliberate, data-informed approach, counties can position themselves to adapt to changing conditions while continuing to deliver reliable, high-quality services to residents.

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