Catalyst Data Solutions – Circular Economy Network Optimization White Paper

Executive Summary

Enterprise infrastructure and operations (I&O) leaders face mounting pressure to reduce network spending while simultaneously advancing sustainability and ESG commitments. Rising OEM pricing, supply-chain volatility, and accelerating technology refresh cycles are forcing organizations to rethink how they source, deploy, and maintain network infrastructure.

Catalyst Data Solutions enables enterprises to meet these challenges by serving as a trusted **circular economy partner and supplying vendor** for network hardware, transceivers, and lifecycle support. By aligning proven cost-optimization strategies with sustainable sourcing models, Catalyst helps organizations reduce total cost of ownership (TCO), extend asset lifecycles, and minimize environmental impact—without compromising performance or reliability.

Aligned with Industry-recommended best practices for optimizing network spending, Catalyst Data Solutions empowers organizations to:

- Reduce capital expenditures through certified refurbished and redeployed hardware
- Extend refresh cycles by supporting asset sweating strategies
- Lower maintenance and sparing costs through sustainable sourcing
- Improve supply-chain resilience and reduce e-waste

The result is a practical, defensible approach to network optimization that delivers measurable financial savings while supporting long-term ESG objectives.

Optimizing Network Spend Through the Circular Economy

The Changing Economics of Enterprise Networking

Network budgets are under sustained pressure. WAN transport and network equipment continue to represent the majority of enterprise network spend, while vendors increasingly raise prices, adjust licensing models, and shorten effective refresh cycles. At the same time, organizations are expected to demonstrate responsible IT practices that reduce waste and carbon impact.

Traditional procurement models—focused almost exclusively on new hardware and OEM-driven refresh timelines—often exacerbate these challenges. Circular economy principles offer a compelling alternative.

Circular Economy Principles Applied to Networking

A circular economy approach prioritizes extending the useful life of assets, redeploying existing equipment, and responsibly sourcing refurbished components. In the context of enterprise networking, this means:

- Reusing and redeploying viable network hardware
- Sourcing certified refurbished equipment and components
- Reducing premature refresh driven solely by OEM end-of-life policies
- Minimizing electronic waste and embedded carbon

Catalyst Data Solutions operationalizes these principles for enterprise customers by acting as a supplying vendor that integrates sustainability directly into network cost optimization strategies.

Reducing Hardware Spend Without Compromising Performance

Certified Refurbished and Redeployed Equipment

Certified refurbished equipment has become a mainstream cost-optimization strategy for enterprises seeking immediate savings and faster availability. When properly tested, validated, and supported, refurbished hardware can deliver equivalent performance at a significantly lower cost.

Catalyst Data Solutions supplies enterprise-grade refurbished networking equipment that enables organizations to:

- Reduce capital expenditures by 20%–50% compared to new purchases
- Avoid long OEM lead times and tariff exposure
- Maintain consistency across deployed environments

This approach directly supports Industry compliant and recommended practices for reducing hardware spend while improving procurement flexibility.

Transceivers: A High-Impact Opportunity

Transceivers represent a disproportionate share of network hardware margins and are a frequent source of unnecessary overspend. By sourcing refurbished or alternative transceivers from qualified suppliers, organizations can unlock significant savings.

Catalyst Data Solutions provides tested and certified transceivers that:

- Meet enterprise interoperability and performance requirements
- Reduce costs by up to 80% versus OEM list pricing
- Lower environmental impact through reuse and lifecycle extension

Extending Asset Lifecycles Through Asset Sweating

Most enterprise networks are refreshed well before equipment reaches the end of its functional life. Asset sweating—strategically extending deployment timelines—offers a powerful way to defer capital spend while maintaining operational stability.

This strategy is most effective when paired with a supplier capable of supporting both current and legacy hardware platforms. Catalyst Data Solutions enables asset sweating by:

- Supplying replacement hardware and components for aging infrastructure
- Supporting redeployment and sparing strategies
- Reducing dependency on OEM-driven refresh schedules

By extending asset lifecycles, organizations not only reduce costs but also lower power consumption and environmental impact.

Optimizing Maintenance and Sparing Strategies

Self-Sparing Enabled by Sustainable Supply

Self-sparing strategies—maintaining a small inventory of spare components—can significantly reduce maintenance costs and improve recovery times. Access to reliable replacement hardware is critical to making this model successful.

Catalyst Data Solutions supports self-sparing by maintaining inventories of refurbished, enterprise-ready equipment that can be rapidly deployed. This enables organizations to:

- Downgrade expensive premium maintenance contracts
- Improve operational resilience
- Reduce total maintenance spend

Supporting Selective Third-Party Maintenance

For post-warranty or lower-risk environments, third-party maintenance models can deliver substantial savings. Catalyst complements these strategies by acting as a supplying vendor for replacement hardware, ensuring continuity and risk mitigation.

Sustainability, ESG, and Business Outcomes

Network optimization and sustainability are no longer competing objectives. Circular economy–aligned sourcing delivers measurable ESG benefits, including:

- Reduced electronic waste
- Lower embedded carbon through reuse
- Improved reporting and governance for responsible IT initiatives

By partnering with Catalyst Data Solutions, organizations can demonstrate tangible progress toward sustainability goals while achieving immediate financial results.

Conclusion: A Smarter Model for Network Optimization

Technology Circular Economy's best practices emphasize competition, refurbished equipment, asset sweating, and maintenance scrutiny as proven methods to optimize network spending. Catalyst Data Solutions brings these recommendations to life through a circular economy supply model that aligns cost reduction with sustainability.

For I&O leaders seeking defensible savings, operational resilience, and ESG alignment, Catalyst Data Solutions serves as a trusted partner in building a more efficient and sustainable enterprise network.