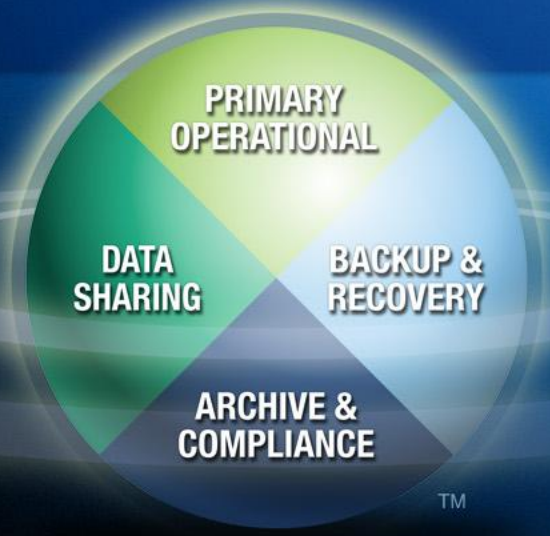
# SHARE - Lunch & Learn
# Going Tapeless on Mainframes: A Customer Panel Discussion

**Session #13150, February 5th, 2013**

CGX CHANNEL GATEWAY X




**Scott James**
VP, Global Alliances
*Luminex Software, Inc.*

**John Fair**
Systems Programmer
*Hormel Foods*

**Wade Juza**
Technical Support Manager – Mainframes
*Acuity Insurance*

**Tom Wiatt**
Mainframe Systems Programmer
*Northwest Regional Data Center*

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# Discussion Topics

- Tape vs. Tapeless
- Virtual Tape & Options
- Customer Panel Discussion:
  - Hormel
  - Acuity
  - NWRDC
- A TCO/ROI Example


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# Tape vs. Tapeless

- Tape and tape robotics cause slower tape data retrieval, batch and HSM processing
- Additional cost of media, shipping and off site storage
- Security risk associated with lost tapes
- Physical tape imposes limits on DR planning and execution
- Limits customers to only two primary vendors for physical tape


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# Going Tapeless Creates More Vendor and Solution Options

Luminex mainframe virtual tape solutions offer:

- **Modular Design** - Scales from entry to high-end mainframe environments
- **Highest Performance** & FICON connectivity options available in the industry
- **Investment Protection** - Storage used can also be re-deployed as primary disk storage (Mainframe or open)
- **Hundreds** of referenceable customers worldwide
- **More Options**... a Better Solution

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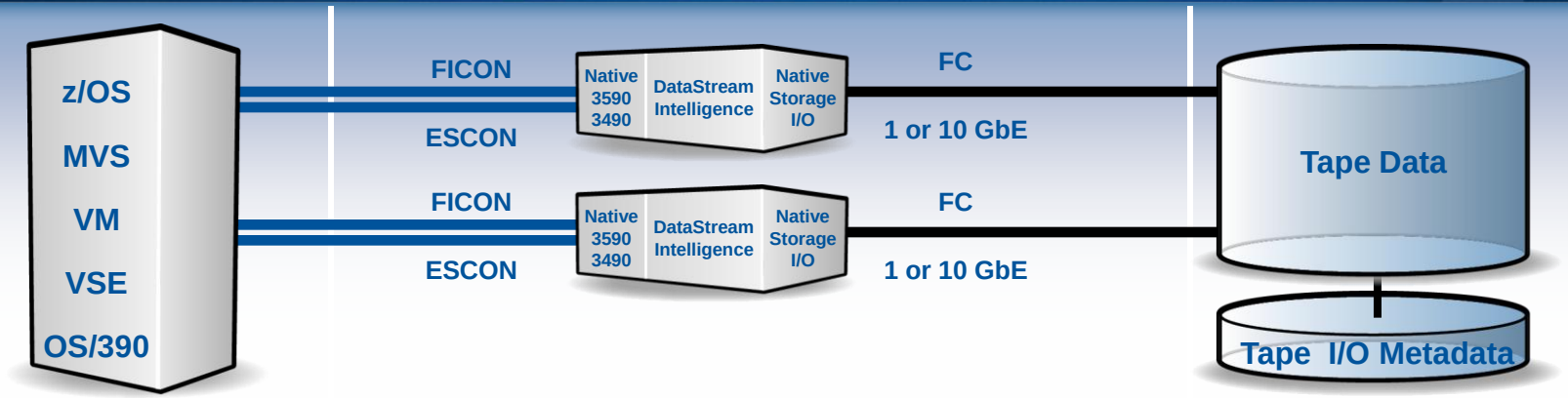
# Luminex MVT Environment

## How the Solution Works




### Mainframe

- Application transparent – non-intrusive
- No MIPS required
- z/OS, MVS, VM, VSE and OS/390 supported
- Works well with all major tape management systems
- SMS via MTL or Esoterics can be used

### Luminex Channel Gateways

- Emulates 3490 or 3590 mainframe tape drives
- “Wire Speed” up to 8 Gb FICON
- Hardware Compression Option
- DataStream Intelligence™ optimizes compression
- Active – Active with NSPOF
- Encryption and Key Management Option
- Modular design makes adding throughput and capacity easy and cost effective
- Industry standard server can act as an open systems backup client (CommVault, TSM, etc.)

### Storage Systems

- Internal, NFS or Fibre Channel attached
- Mainframe tape volumes stored as standard files
- Replication for backup/DR
- RAID 6 Data Protection
- Enterprise and modular storage systems are supported

# Luminex Virtual Tape & Options

CGX CHANNEL GATEWAY X

WAN, LAN or FC

**Replication**
at the control unit or storage level

**RepMon**
Monitors replication at the VOLSER level

**LTMON**
Integrated, centralized management from the mainframe console

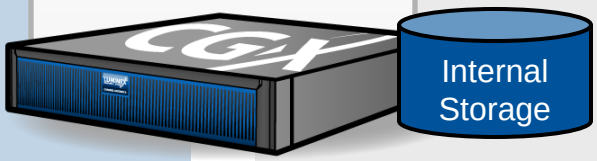
DCS

**Data Center Swap**
with reverse replication

## OPTIONAL FEATURES

**CGSafe**
Encryption and key management

**CGX**
Core product with up to 8Gb FICON, SMEs & hundreds of customers going tapeless




**Compression** and/or deduplication

Single source for Virtual Tape and Tape Migration

Tape Monitoring (Device) and Allocation & Control System

## STORAGE OPTIONS

**Enterprise** storage options

**Modular** storage options

CloudTAPE

Cloud-based tape vaulting solution for mainframes

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# About Hormel

- Hormel Foods Corporation is based in Austin, MN
- We’re a member of the Standard & Poor's (S&P) 500 Index
- We're a multinational manufacturer and marketer of consumer-branded food and meat products, including SPAM

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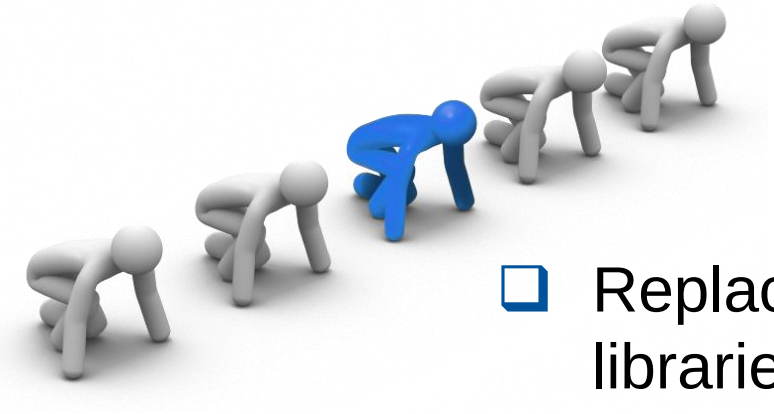
# Goals and Objectives



- Replace aging tape and 3494 tape libraries
  - Reduce maintenance costs
  - 10+ year old 3590 tape cartridges
- Leverage the new solution to enhance disaster recovery preparedness
- Improve HSM Performance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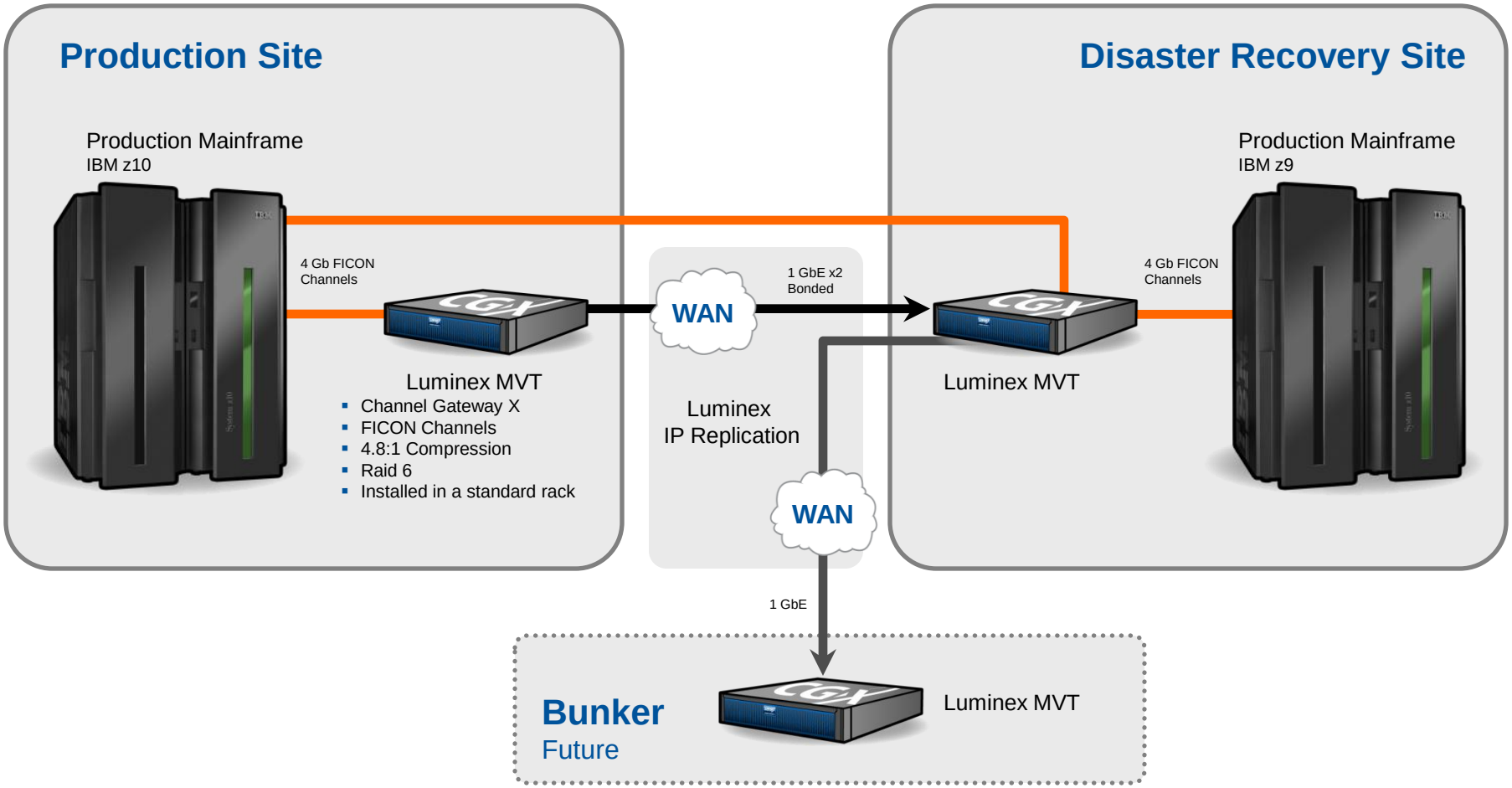
# Hormel's New Solution & Configuration





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# How Did We Do?

## Benefits/Achievements

- ☑ Tape data is retrieved using high speed disk, instead of physical tape & tape robotics
- ☑ Data retrieval via HSM is now instantaneous
- ☑ It is no longer necessary to write two copies of each tape
- ☑ Tape data is replicated between two sites using Luminex Replication
- ☑ Replication is monitored at the VOLSER level using Luminex RepMon
- ☑ Only 2U of rack space is required for MVT
- ☑ Our disaster recovery plan has been dramatically improved
- ☑ All tape volumes are immediately available locally & at the remote site for DR

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# About Acuity

- In business since 1925 and listed in the top 75 largest insurers in the nation, with $2.43 billion in assets
- Writes a broad spectrum of property and casualty coverages for families and businesses in 20 states with 243,000 policies
- $1 billion in annual revenue through over 1,000 independent agencies
- Named a Top 500 Technology Company by *InformationWeek* for eight straight years
- Employs 850 people


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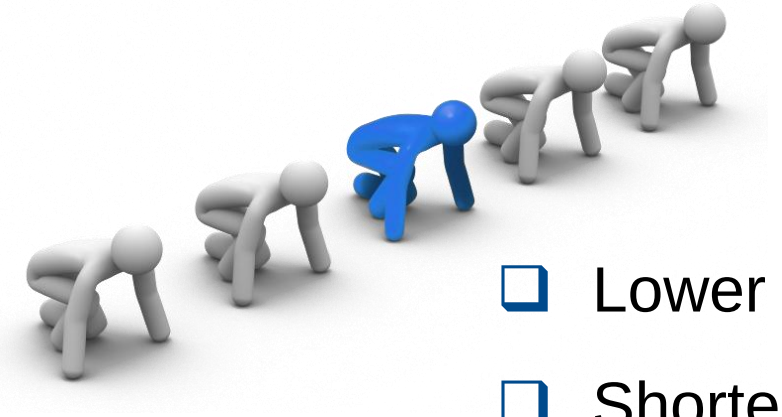
# What were our Goals and Objectives?



- Lower operating and maintenance costs
- Shorten batch and backup windows
- Improve, simplify the Disaster Recovery process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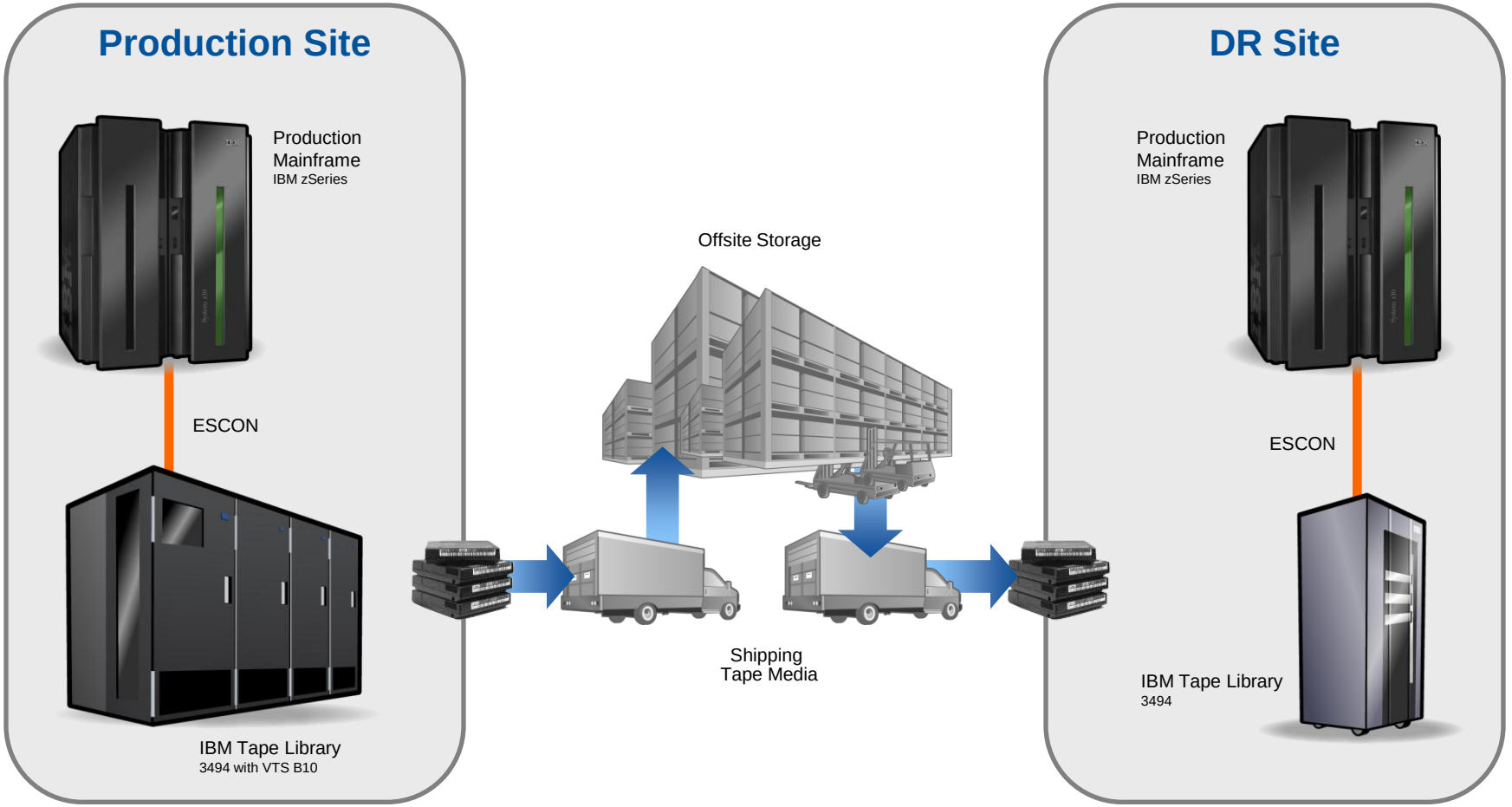
# Previous Tape Environment





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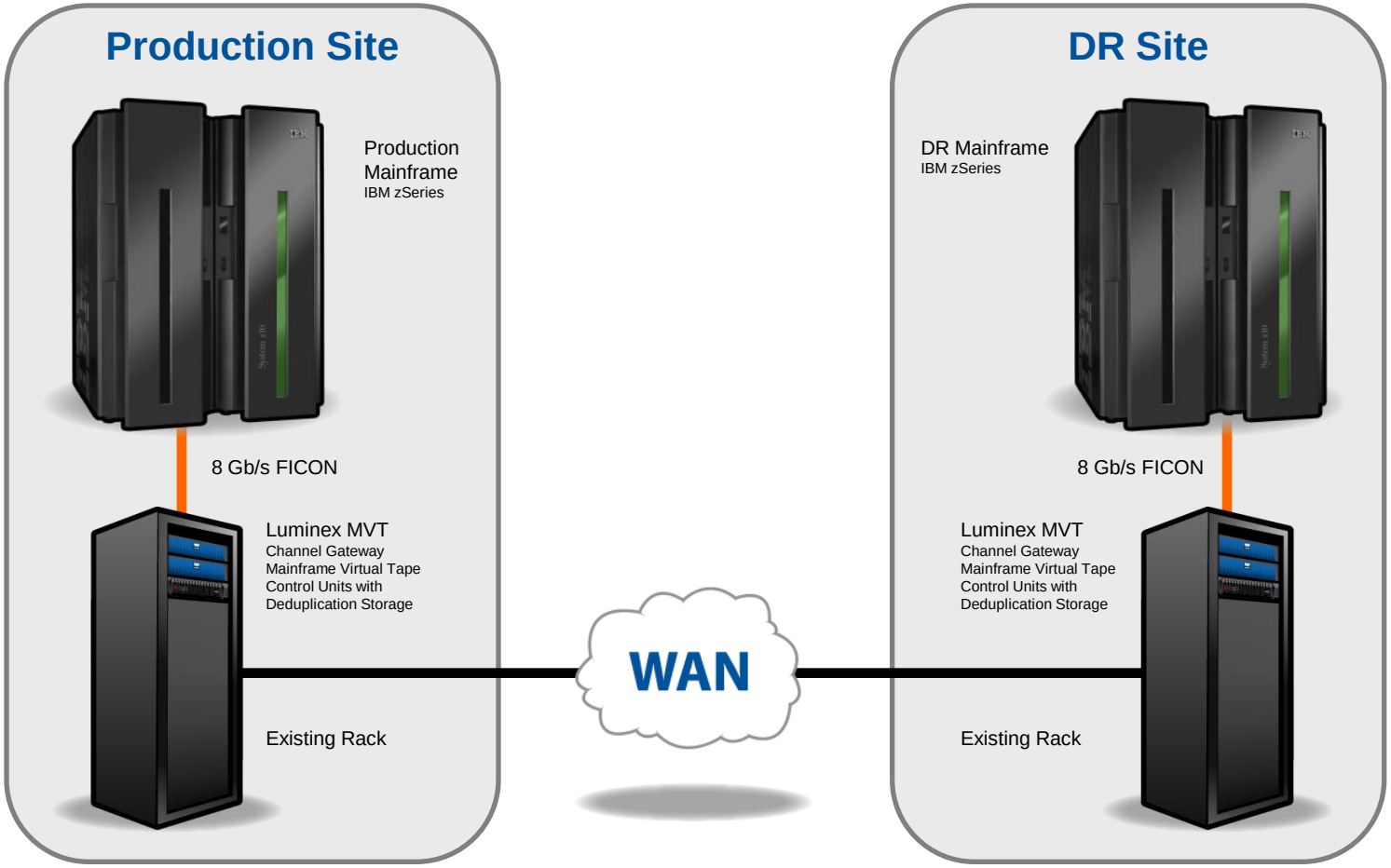
# New Tape Environment





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# Floor Space Savings

**BEFORE**

**AFTER**

No new floor space required…
Installed in an existing rack

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# How Did We Do?



## Benefits/Achievements

- ☑ We're completely tapeless!
- ☑ Going tapeless cost significantly less than continuing with physical tape
- ☑ Reduced MSUs by 30% during batch processing by shifting encryption from the host to the virtual tape storage system
- ☑ Significantly reduced floor space – installed into existing rack
- ☑ Shortened batch windows by 2.5 hours
- ☑ Backups are at the DR site within minutes
- ☑ Reduced DR testing time from 8 hours down to 3 hours
- ☑ Took full advantage of our upgrade to 8 Gb/s FICON

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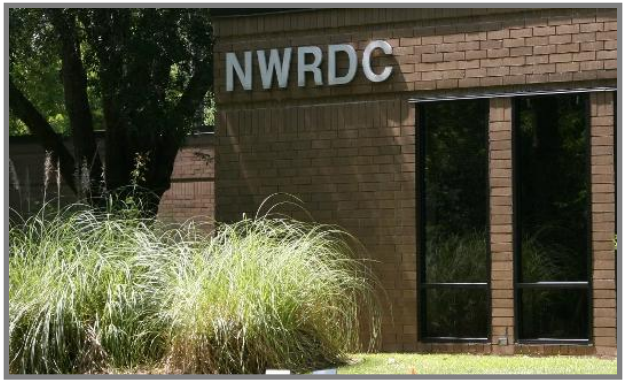
# Northwest Regional Data Center (NWRDC)




- NWRDC's primary data center is based in Tallahassee, FL
- Our disaster recovery hardware is based in Atlanta, GA
- We're a leading provider of computing, support and application hosting
- The center primarily serves the governmental and educational community
- We also provide center-based disaster recovery services including hot, warm or cold sites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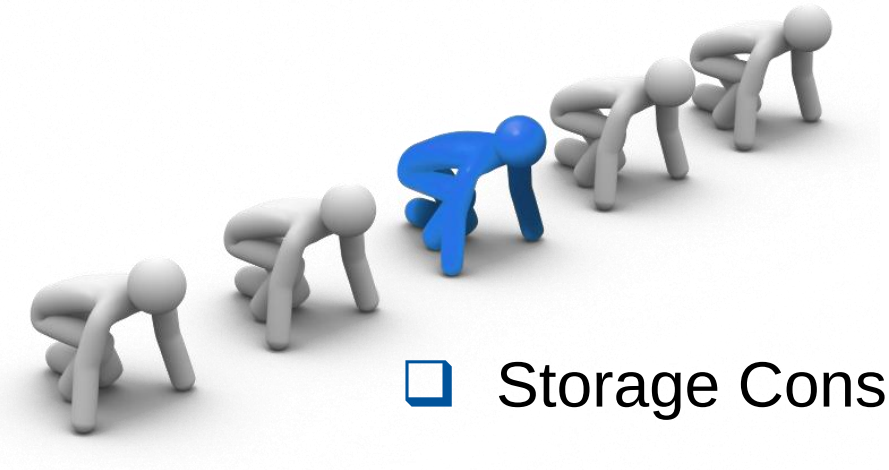
# Goals and Objectives



- Storage Consolidation
- Implement Higher Capacity Remote Replication for Virtual Tape
- Plan ahead for replacement of aging tape libraries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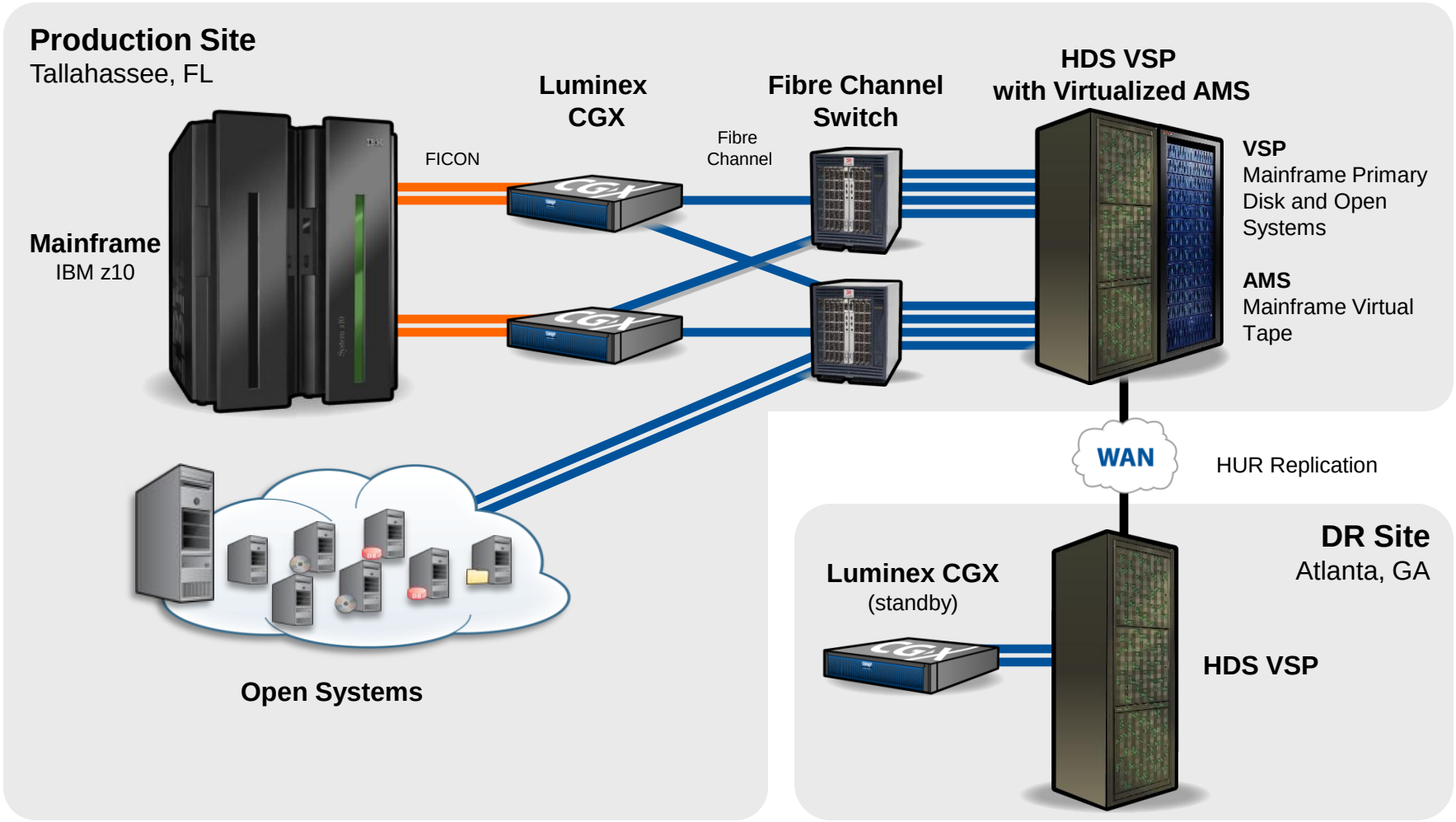
# NWRDC's New Solution & Configuration





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# How Did We Do?



## Benefits/Achievements

- ☑ Virtual tape is continuously replicated to Atlanta using Hitachi Universal Replicator (HUR)
- ☑ Tape backup times have been reduced by 80%
- ☑ Replication for DR has been simplified (using HUR for DASD and virtual tape)
- ☑ The aging tape libraries are being phased out
- ☑ Storage Consolidation helps to simplify and provide predictable customer pricing via Capacity-On-Demand

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# Q&A – Panelists

- **John Fair**
  *Hormel Foods*
- **Wade Juza**
  *Acuity Insurance*
- **Tom Wiatt**
  *Northwest Regional Data Center*
- **Scott James**
  *Luminex Software, Inc.*

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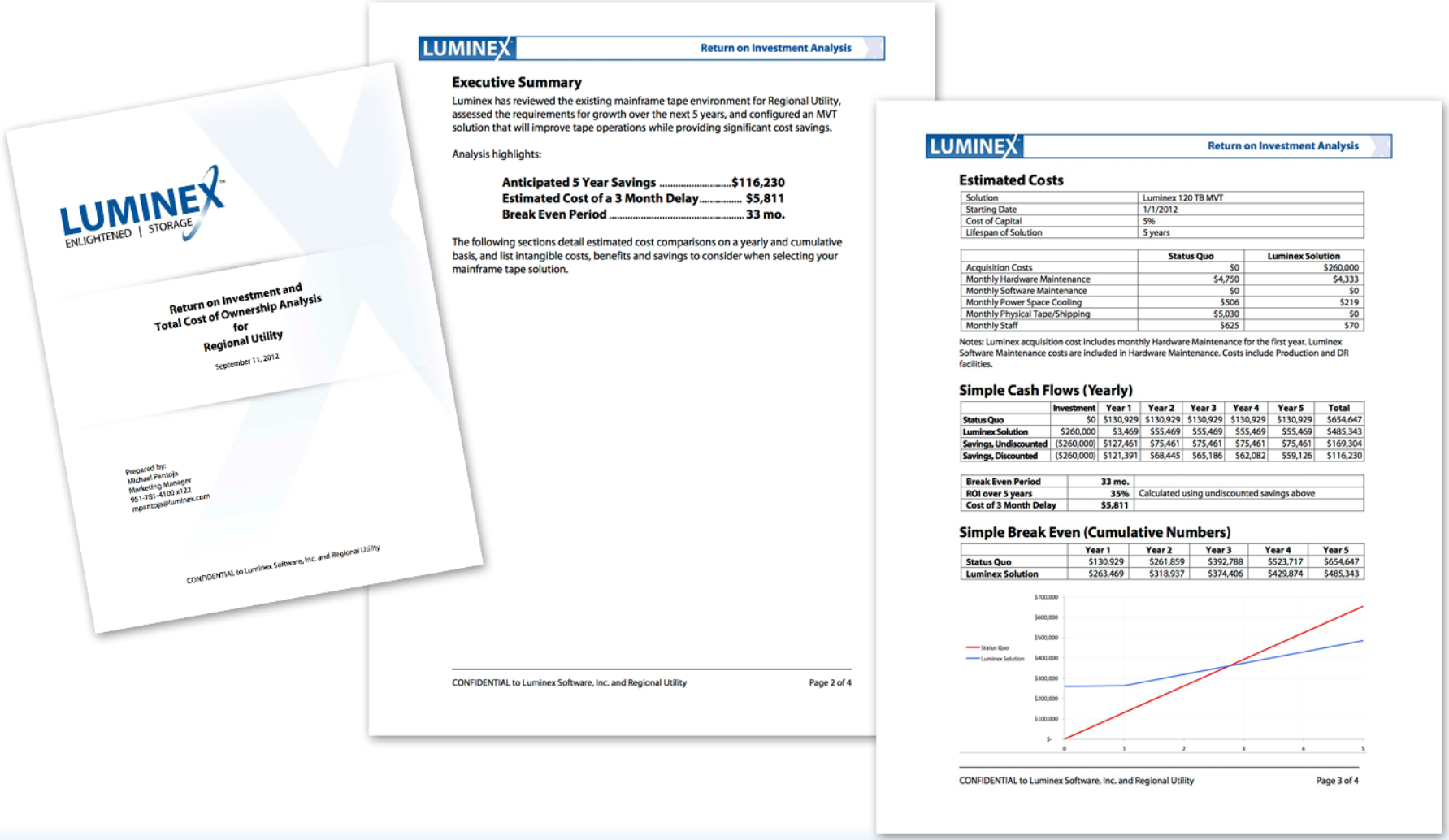
# ROI and TCO Report Example



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ENLIGHTENED | STORAGE

**Return on Investment and Total Cost of Ownership Analysis for Regional Utility**

September 11, 2012

Prepared by:
Michael Pantoja
Marketing Manager
951-781-4100 x122
mpantoja@luminex.com

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LUMINEX — Return on Investment Analysis

## Executive Summary

Luminex has reviewed the existing mainframe tape environment for Regional Utility, assessed the requirements for growth over the next 5 years, and configured an MVT solution that will improve tape operations while providing significant cost savings.

Analysis highlights:

**Anticipated 5 Year Savings ..... $116,230**
**Estimated Cost of a 3 Month Delay ..... $5,811**
**Break Even Period ..... 33 mo.**

The following sections detail estimated cost comparisons on a yearly and cumulative basis, and list intangible costs, benefits and savings to consider when selecting your mainframe tape solution.

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LUMINEX — Return on Investment Analysis

## Estimated Costs

| | |
|---|---|
| Solution | Luminex 120 TB MVT |
| Starting Date | 1/1/2012 |
| Cost of Capital | 5% |
| Lifespan of Solution | 5 years |

| | Status Quo | Luminex Solution |
|---|---|---|
| Acquisition Costs | $0 | $260,000 |
| Monthly Hardware Maintenance | $4,750 | $4,333 |
| Monthly Software Maintenance | $0 | $0 |
| Monthly Power Space Cooling | $506 | $219 |
| Monthly Physical Tape/Shipping | $5,030 | $0 |
| Monthly Staff | $625 | $70 |

Notes: Luminex acquisition cost includes monthly Hardware Maintenance for the first year. Luminex Software Maintenance costs are included in Hardware Maintenance. Costs include Production and DR facilities.

## Simple Cash Flows (Yearly)

| | Investment | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Total |
|---|---|---|---|---|---|---|---|
| **Status Quo** | $0 | $130,929 | $130,929 | $130,929 | $130,929 | $130,929 | $654,647 |
| **Luminex Solution** | $260,000 | $3,469 | $55,469 | $55,469 | $55,469 | $55,469 | $485,343 |
| **Savings, Undiscounted** | ($260,000) | $127,461 | $75,461 | $75,461 | $75,461 | $75,461 | $169,304 |
| **Savings, Discounted** | ($260,000) | $121,391 | $68,445 | $65,186 | $62,082 | $59,126 | $116,230 |

| | | |
|---|---|---|
| **Break Even Period** | **33 mo.** | |
| **ROI over 5 years** | **35%** | Calculated using undiscounted savings above |
| **Cost of 3 Month Delay** | **$5,811** | |

## Simple Break Even (Cumulative Numbers)

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| **Status Quo** | $130,929 | $261,859 | $392,788 | $523,717 | $654,647 |
| **Luminex Solution** | $263,469 | $318,937 | $374,406 | $429,874 | $485,343 |




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# ROI and TCO Report Example

## Executive Summary

LUMINEX Return on Investment Analysis

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# ROI and TCO Report Example

## Estimated Costs and Simple Cash Flows

CHANNEL GATEWAY X

### Estimated Costs

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# ROI and TCO Report Example

## Simple Break Even

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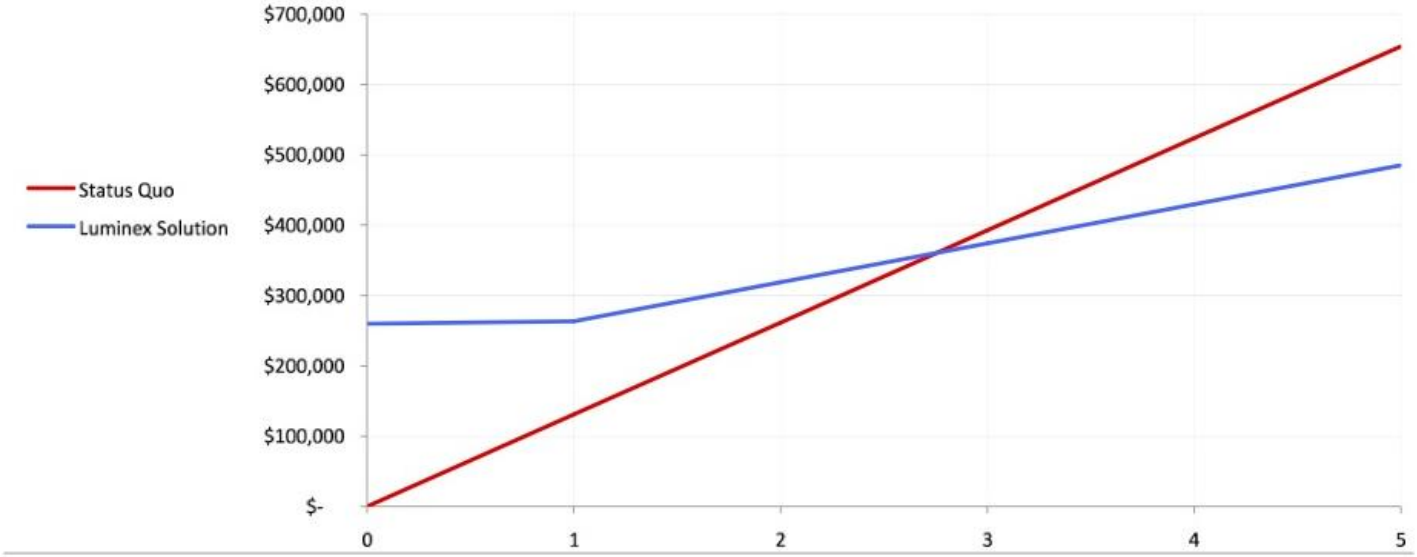



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# ROI and TCO Report Example

## Additional Golden Nuggets

Reduced cost by:

- Eliminate software support cost for unused tape software (STK HSC, CA Encryption, etc.)
- Less space required at 3rd Party DR sites (Less space = lower cost)
- Fewer resources and less time required for DR testing (Conduct remote DR test)
- Reduce MSU's by shifting encryption from host, to virtual tape
- Use fewer FICON channels

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# Thank you for your time and consideration

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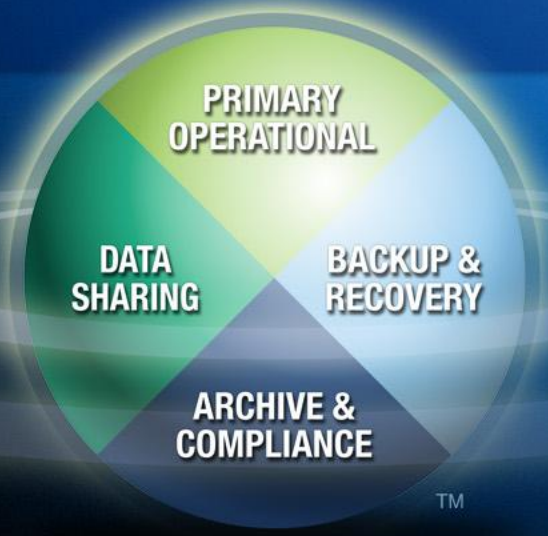


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