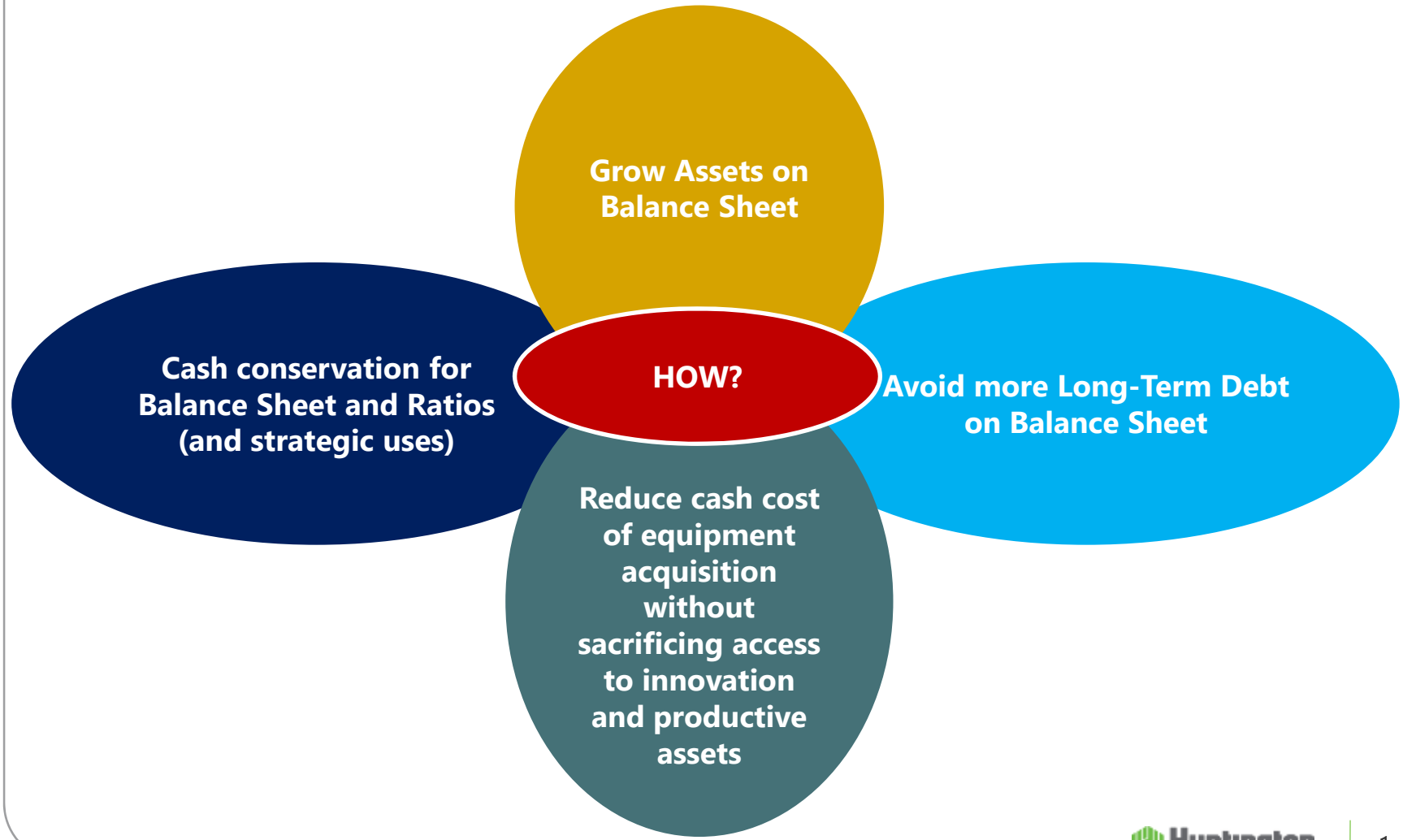
Proposed Refresh Strategy

Agenda:

- Current State: **Strategic goals and constraints**
- Current State: Obsolescence Costs on Aged Endpoints ("TCO")
- Standard Objectives and Tactics: **Financial and Other Objectives**
- Assumptions and Metrics
- Proposed Implementation Timeline: Unit Replacement/Refresh schedule
- Cost Harvest Timeline:
  - **Obsolescence cost removal/reduction** (versus "Do Nothing" scenario)
  - **TCO Savings and Refresh Costs**
  - **Comparing Lease versus Buy for best transition method**
  - **Equipment Intake cost reductions/savings**
  - **Combined Economic Opportunity**
- Contributions toward **Strategic and Organizational Goals**
- Major finance market trend: movement from Cash to Leasing

Proposed Refresh Strategy: Current State

Strategic Goals and top-level Constraints (e.g. possible M&A scenarios):



Methods for Eliminating Waste in End-User Operations

Main Areas of Wasted Expense

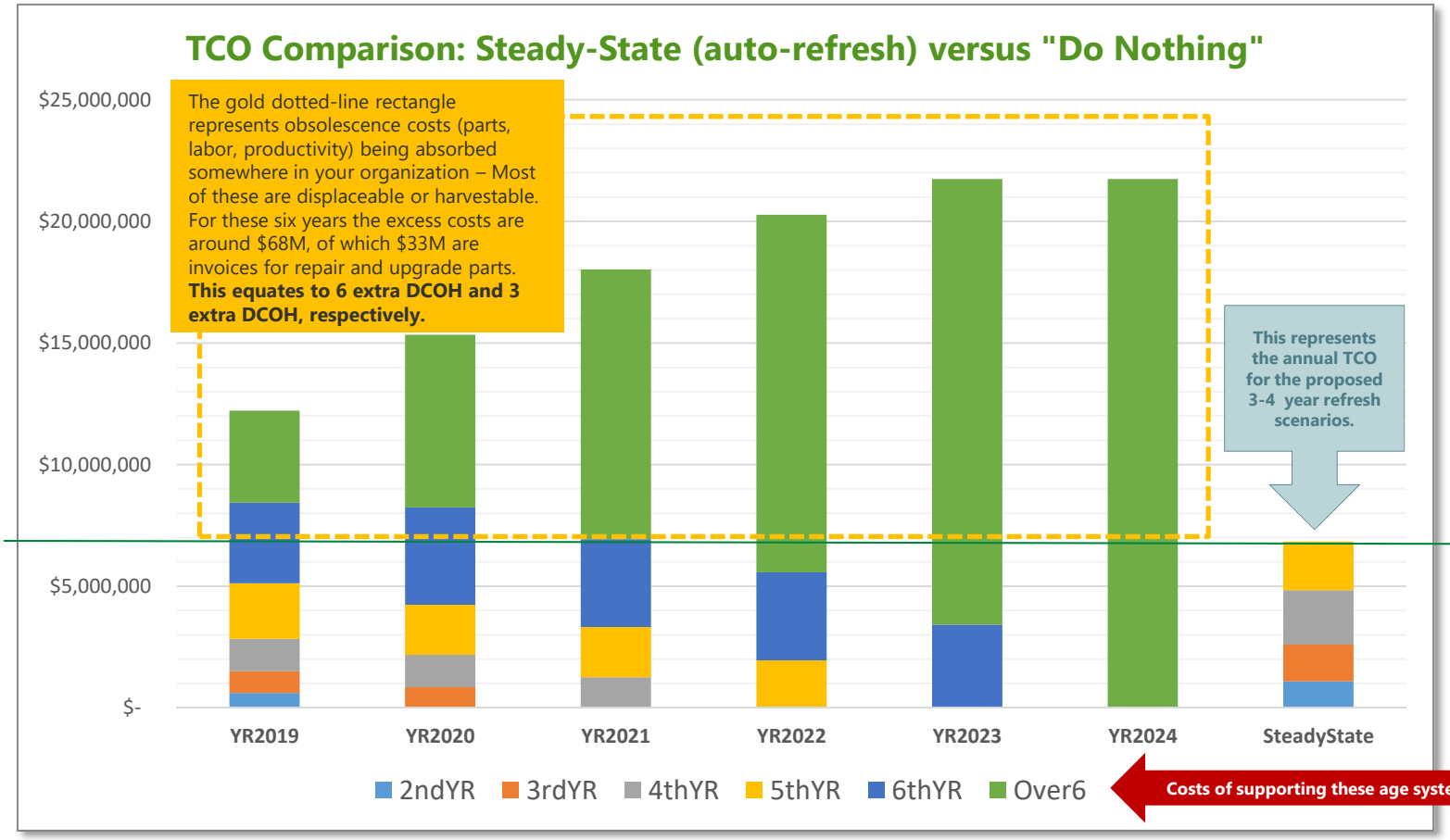
1. **Obsolescence Costs** in Existing Installed Base – For under-managed EUC operations, these costs can be 300% more that the cost of the equipment

2. Too high Asset Cost in **acquisition processes** – acquisition of short-lived assets (e.g. endpoints) using Cash typically wastes 5-8% of the purchase price by not exploiting residual-value based economics

3. Too high Costs due to **unplanned refresh events** – when end-users demand new systems 'out of cycle' or EPIC requires you to upgrade systems (e.g. monitors or servers), there can be huge write-downs and accelerated cash spend.

Current State: Cost of Obsolete Endpoints

Obsolescence cost of Current State (Assuming only HALF the IDC* numbers)



* IDC (International Data Corp) tracks total cost of operations for endpoint devices. They publish their studies for use as benchmarks in commercial enterprises. Healthcare as an industry only spends about HALF as much on end-user computing as do enterprises, so I have reduced their published COST numbers by 50% to arrive at conservative estimates. [Hospital ratios sourced from *Computer Economics* 2018 reports.]

Proposed Refresh Strategy: Standard Objections & Tactics

Financial Objectives

1. Reduction/Removal of Obsolescence Costs in Existing Installed Base

What	How	Opportunity
Eliminate Parts and Labor Costs being consumed by obsolete systems	Retire obsolete systems in waves, starting with oldest equipment	Savings of around $68M over the 6 year period. [32% Parts; 68% Labor].

2. Reduction of Asset Cost in INTAKE processes

What	How	Opportunity
Trim acquisition costs—both equipment costs and admin labor	Leverage residual-based finance for equipment costs; use ITAM system to reduce admin labor costs	Up-front cash savings (net) of between 5%-6% per system acquired; Cash flow deferral; Net zero cost refresh in 4 years; Reduce manual ITAM admin tasks by at least 30%.

3. Reduction of Costs due to unplanned refresh events

What	How	Opportunity
Reduce book write-down and extra interest costs in cases of unplanned refresh	Leverage residual-based finance to preserve economic value in early equipment roll-over	For between 2% and 10% unplanned refreshes (units), negative financial impact can be reduced by between 15% and 22%.

Proposed Refresh Strategy: Standard Objections & Tactics

Additional Objectives

4. Other Financial and Organizational Benefits

What	How	Opportunity
Deferred cash usage	Time-based payments	Measured by internal IRR/ROI ratios
Financial structuring to avoid debt/interest/etc.	Selective use of finance or operating leases	Compliance with covenants; Ratio management for rating agencies
Smoother, more predictable expense lines	Time-based payments plus price-performance gains	Good projects that didn't get funded due to cash challenges; better leverage of cash by Treasury
Improved management leverage	"Forced" business value review points from action points in lease	To ensure departments and business units are assessing their technology needs routinely—to ensure best-in-class results
Easier support load on IT	**Accurate ITAM data feed; more homogenous footprint over time**	**Reduced service desk problem resolution time; reduced software upgrade process times.**
Employee productivity gains	Faster systems reduce wasted time and facilitate additional tasks	Gains range from 4.5% to 11% of employee work time.

Enhancements to endpoint asset management can generate additional management, operational and financial benefits – that are real and well-understood, but more difficult to quantify with precision.

Proposed Refresh Strategy: Assumptions / Metrics

Assumptions, Metrics, and Data Needs:

- Aiming for steady refresh cycle of 3 years for laptops and 4 years for desktops
- Migration costs/labor to be outsourced to trusted service partner
- Will integrate replacement of obsolete gear into implementation of steady-state refresh (i.e. no spike up front to clear out all the old gear)
- Create improved operating environment for IT resources through removal of obsolete gear and better ITAM data feed into ITSM and CMDB repositories

- Trim 4-5% of IT equipment budget, smooth expense line, and reduce impact of unplanned refreshes – while steadily increasing performance and capacity (via leveraging technology industry advances and competition)
- Trim 8-10% of IT support desk labor costs by eliminating need to support and repair aged systems
- Trim ITAM workload by 5-10-15% -- no net FTE increases for administration

- Data Need: Finalized unit and kit prices, mix of endpoints/printers/scanners
- Data Need: Basic agreement on rollout schedule
- Data Need: Description of any show-stopper items and constraints

Discussion ?

Proposed Refresh Strategy: Implementation Timeline

Unit Replacements by Year

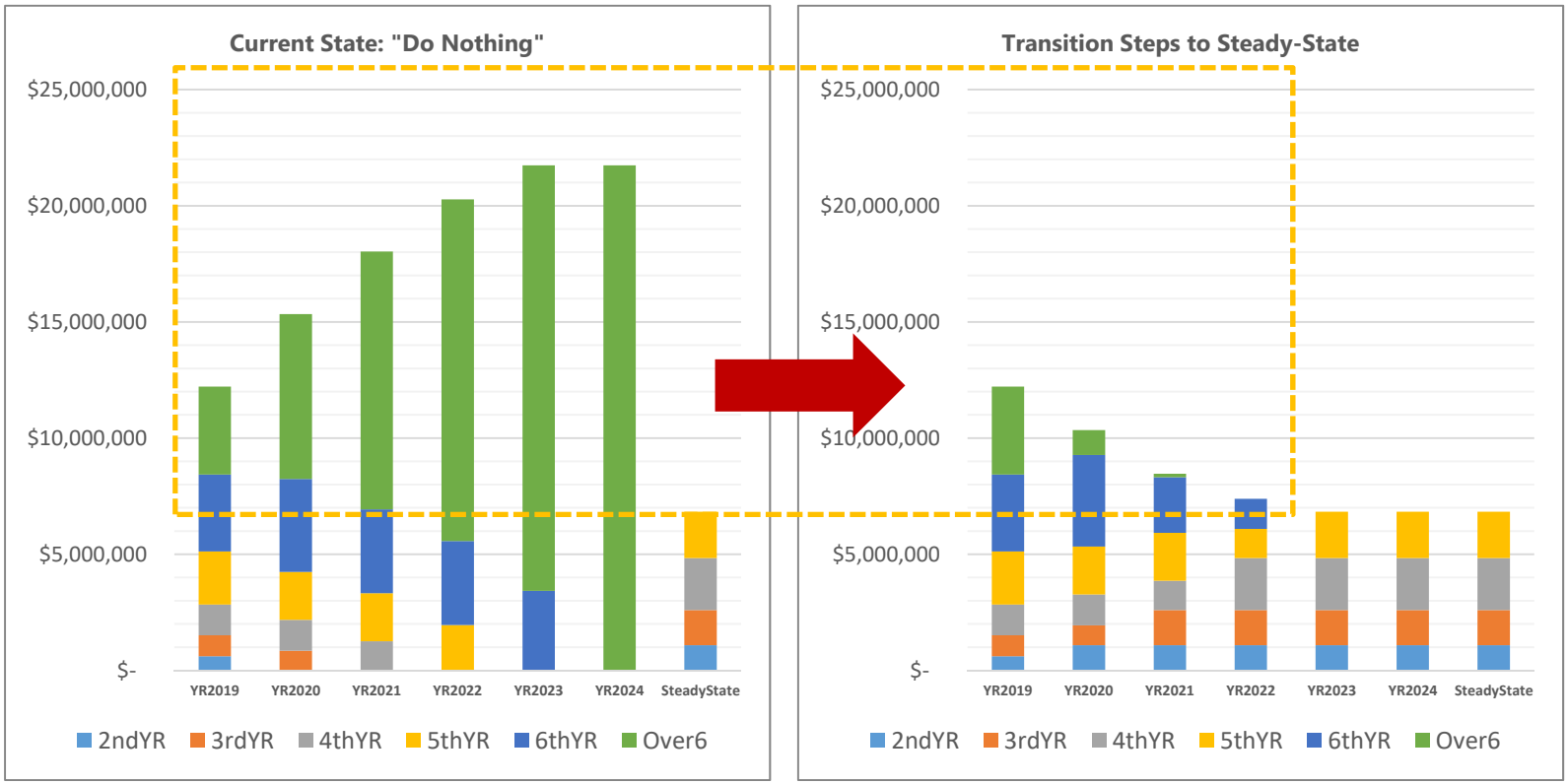
		2019	2020	2021	2022	2023
Desktop	Units out of Warranty	5,875	1,375			
	Units to Refresh:	4,500	4500	4500	4500	4500
Laptop	Units out of Warranty	5,104	1,771			
	Units to Refresh:	3,333	3,333	3,333	3,333	3,333
Total	Units out Warranty:	10,978	3,145	-	-	-
	Units to Refresh:	7,833	7,833	7,833	7,833	7,833

This will remediate the installed base by the middle of the 2nd year – 18 months from start.

Proposed Refresh Strategy: Cost Harvest Timeline

1. Obsolescence cost removal/reductions: Current State vs Transition

TCO Cost by Age of Unit: "Do Nothing" versus Steady/Uniform Refresh



Proposed Refresh Strategy: Cost Harvest Timeline

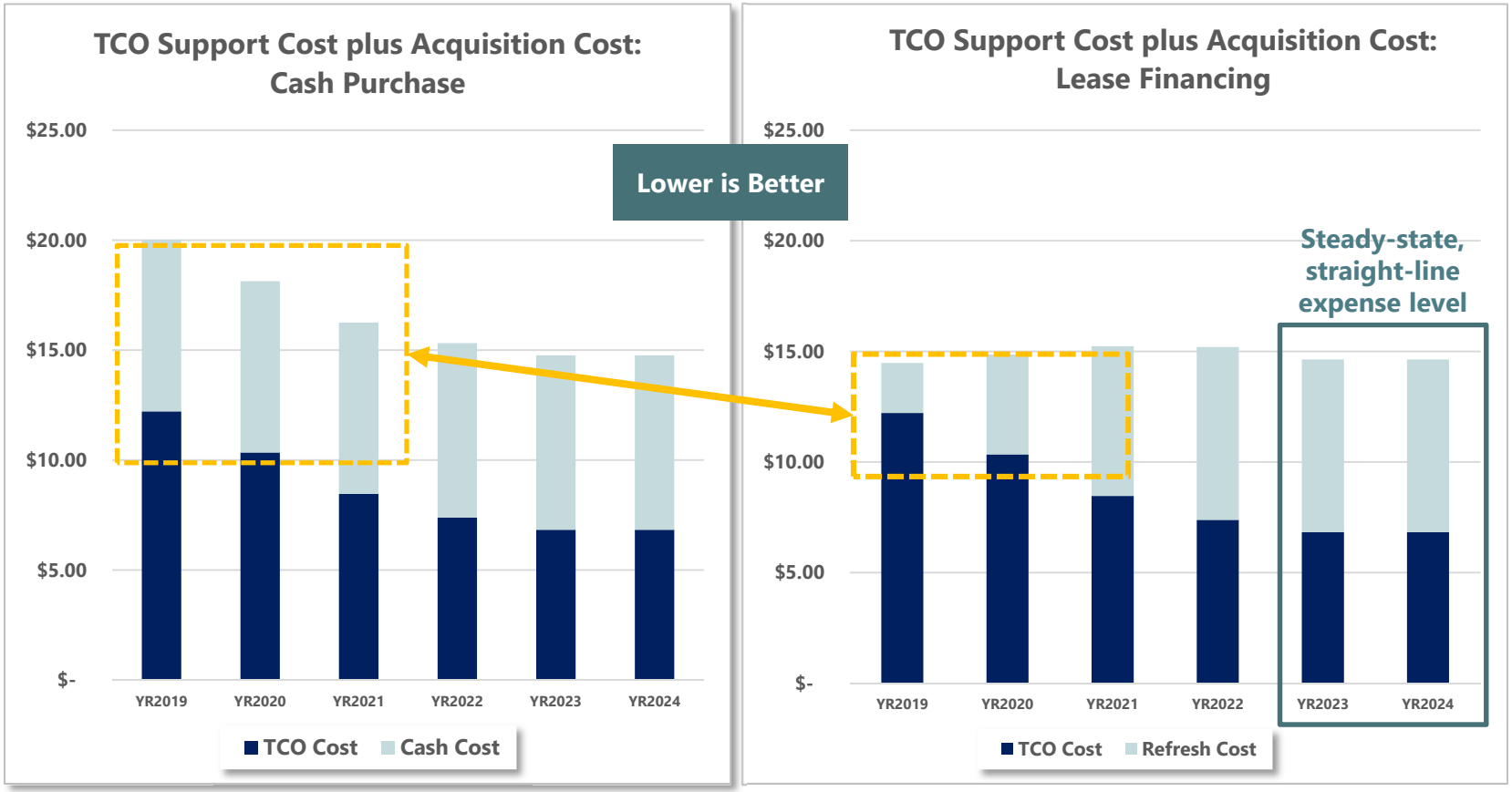
1. Obsolescence cost removal/reductions: TCO Savings and Refresh Costs$

TCO Costs Reclaimed by Refresh – Then Acquisition Cash Outflows by Funding ($M)

Proposed Refresh Strategy: Cost Harvest Timeline

1. Obsolescence cost removal/reductions: Net Cash Flows: Purchase vs Lease

Less Expensive to Use Lease Finance to Move to Steady-State Refresh Cycle ($M)



Proposed Refresh Strategy: Cost Harvest Timeline

Purchase versus Refresh Comparisons: Unit costs and Blended Costs

	Purchase Model	Lease Structure			Cost Comparisons		
	Purchase $				5.00%	: Cost of Debt (used for PV)	
	Unit Cost$	LRF 36 mos	Mon PMT$	36 PMTS	PV of PMTS	Unit Savings$	% Savings at PV
Latitude 3590 kit	$1,158.00	0.026483	$30.67	$1,104.02	$1,027.50	$130.50	11.3%
Total Laptop Config:	$1,158.00	0.026483	$30.67	**$1,104.02**	$1,027.50	$130.50	**11.3%**
	Unit Costs	LRF 48 mos	Mon PMT$	48 PMTs	PV of PMTS	Unit Savings$	% Savings at PV
Optiplex 3050 kit	$874.00	0.021859	$19.10	$917.03	$833.04	$40.96	4.7%
Total Desktop Config:	$874.00	0.021859	$19.10	**$917.03**	$833.04	$40.96	**4.7%**

	Annual Units Refreshed	Purchase		Lease Savings	
		Unit Cost$	Extended	per Unit$	Extended
Laptop Kit	3,333	$1,158	$3,859,614	$130.50	$434,957
Desktop Kit	4,500	$874	$3,933,000	$40.96	$184,311
Total Units:	**7,833**		**$7,792,614**		**$ 619,268**
				Annual Blended Cash/Cost Savings:	**7.95%**

Proposed Refresh Strategy: Cost Harvest Timeline

2. Equipment Intake Cost Reductions: Savings applied to Rollout Schedule

		2019	2020	2021	2022	2023
Desktop	Units out of Warranty	5,875	1,375			
	Units to Refresh:	4,500	4,500	4,500	4,500	4,500
	Unit cost	$ 874	$ 874	$ 874	$ 889	$ 889
	Extended Cost	$ 3,933,000	$ 3,933,000	$ 3,933,000	$ 4,001,828	$ 4,001,828
	Monthly PMT (unit)	$19.10	$19.10	$19.10	$19.10	$19.44
	Extended PMT	$ 1,031,657	$ 1,031,657	$ 1,031,657	$ 1,031,657	$ 1,049,711
	Cumulative PMTS	$ 1,031,657	$ 2,063,315	$ 3,094,972	$ 4,126,629	$ 4,126,629
Laptop	Units out of Warranty	5,104	1,771			
	Units to Refresh:	3,333	3,333	3,333	3,333	3,333
	Unit cost	$ 1,158	$ 1,158	$ 1,158	$ 1,178	$ 1,178
	Extended Cost	$ 3,859,614	$ 3,859,614	$ 3,859,614	$ 3,927,157	$ 3,927,157
	Monthly PMT	$30.67	$30.67	$30.67	$31.20	$31.20
	Extended PMT	$ 1,226,570	$ 1,226,570	$ 1,226,570	$ 1,248,035	$ 1,248,035
	Cumulative PMTS	$ 1,226,570	$ 2,453,140	$ 3,679,710	$ 3,679,710	$ 3,679,710
Combined	Extended PMTs	$ 2,258,227	$ 2,258,227	$ 2,258,227	$ 2,279,692	$ 2,297,746
	Cumulative PMTs	$ 2,258,227	$ 4,516,455	$ 6,774,682	$ 7,806,339	$ 7,806,339
Cash Savings or Deferral	This Year	$ 5,534,387	$ 3,276,159	$ 1,017,932	$ 122,646	$ 122,646
	Cumulative	$ 5,534,387	$ 8,810,546	$ 9,828,478	$ 9,951,124	$ 10,073,770

Denotes 'net zero refresh' -- units being replaced have greater value, but the same monthly payments. No 'net new' paymentamounts ever show up again--an Evergreen model - adjusted only for inflation (0.6%/yr used in model).

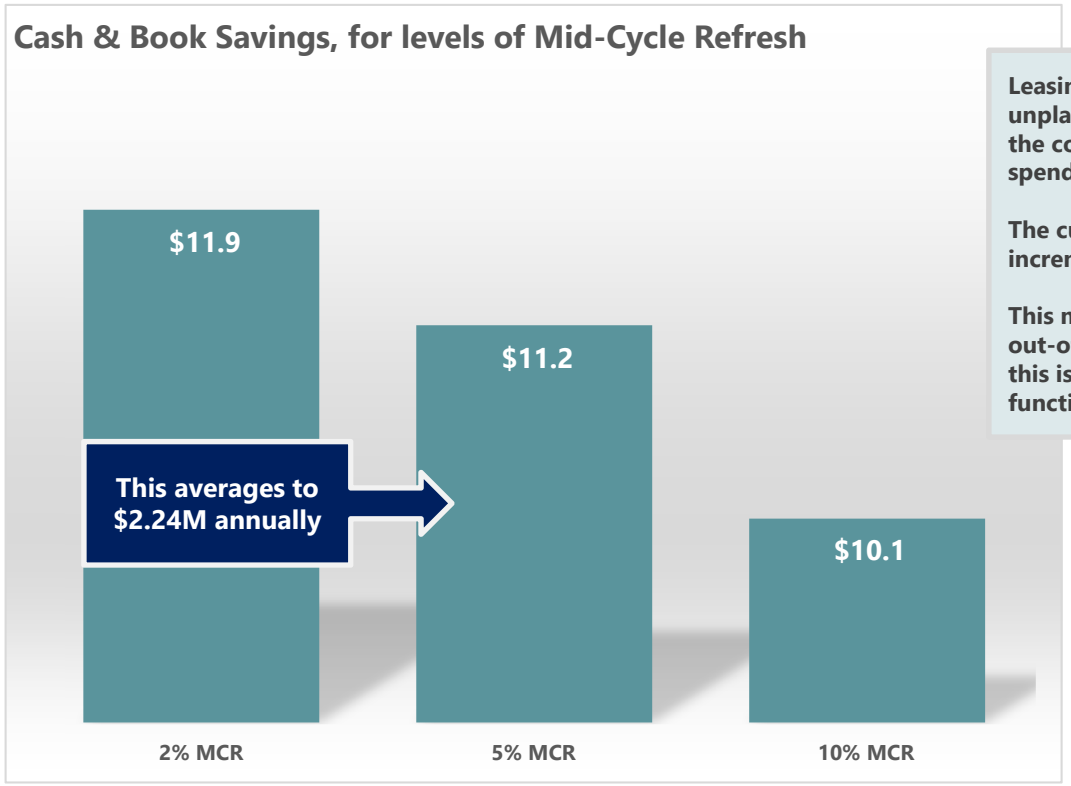
Proposed Refresh Strategy: Cost Harvest Timeline

3. Reduction of Costs due to unplanned refresh events

Invariably—though we mandate and budget on the basis of full life cycle realization—there are unplanned and out-of-cycle refreshes. They may be due to personnel changes, specialty software requirements, new changes in regulations, or job function changes. We are generally forced to take sub-optimal actions, largely for economic loss containment. These play havoc with the mandated depreciation cycles of purchasing and cash flow [e.g. for 2,000 endpoints, 3-year refresh, 10% mid-cycle refresh, and $800 unit cost, the book value write-down and extra interest cost of accelerated cash outflow is around $30K per year—an equivalent of 37 extra systems per year.]

In your case, we can model this:

- 28,000 endpoints
- Unit cost of $1,000
- 3 year refresh cycle (for simplicity)
- 5 year straight line depreciation cycle
- 4% IBR
- 2, 5, 10% out-of-cycle refresh rate (using mid-cycle for calculations)



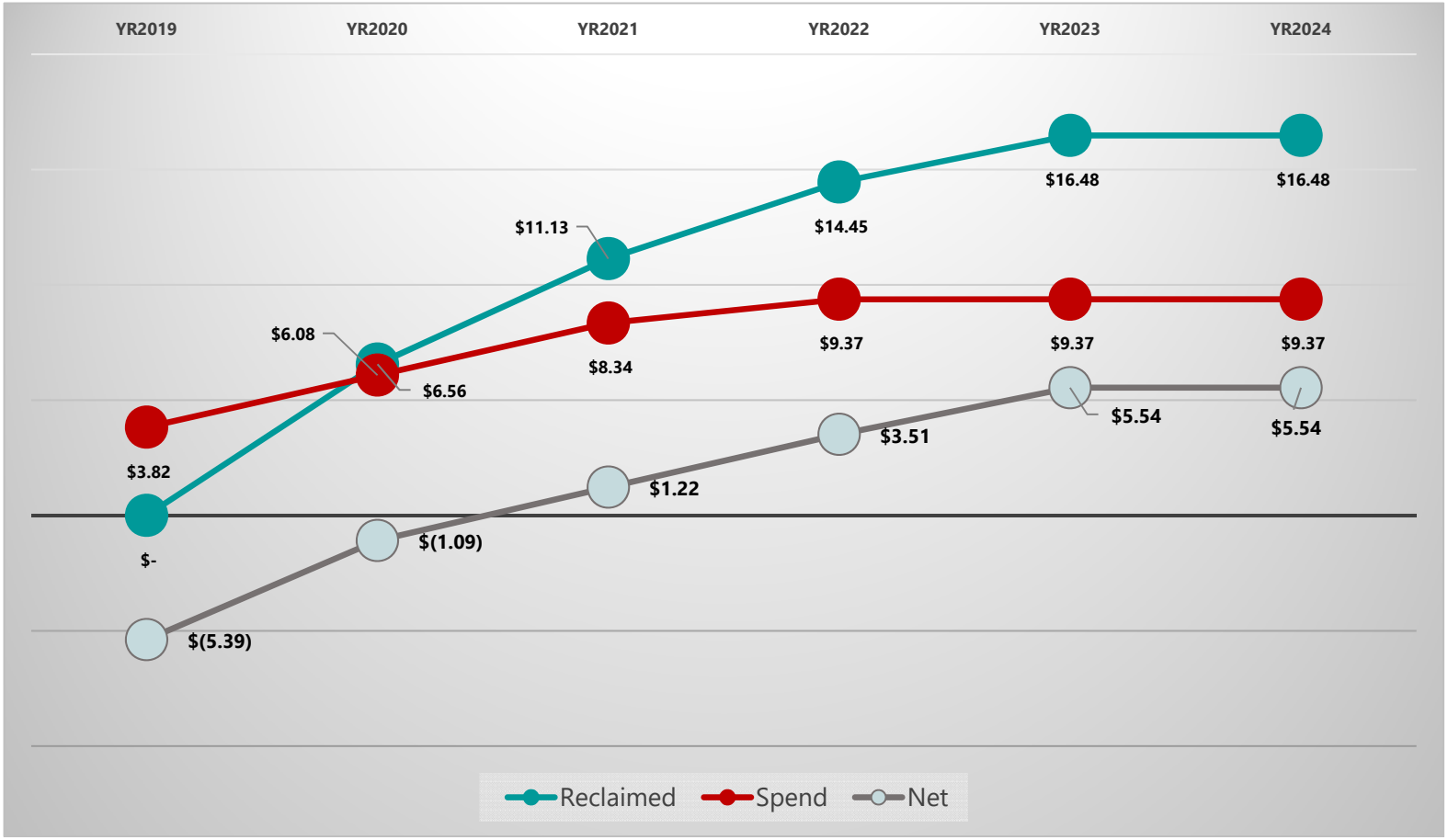
Leasing provides the lowest cost in dealing with unplanned refresh. It is consistently lower than the cost of write-downs and accelerated cash spend.

The cumulative savings continue to grow incrementally refresh after refresh.

This model holds true for up to a rate of 15% of out-of-cycle refresh. If the rate is higher than that, this is an indication that the technology planning function is out-of-step with end user needs.

Proposed Refresh Strategy: Combined Economic Opportunity

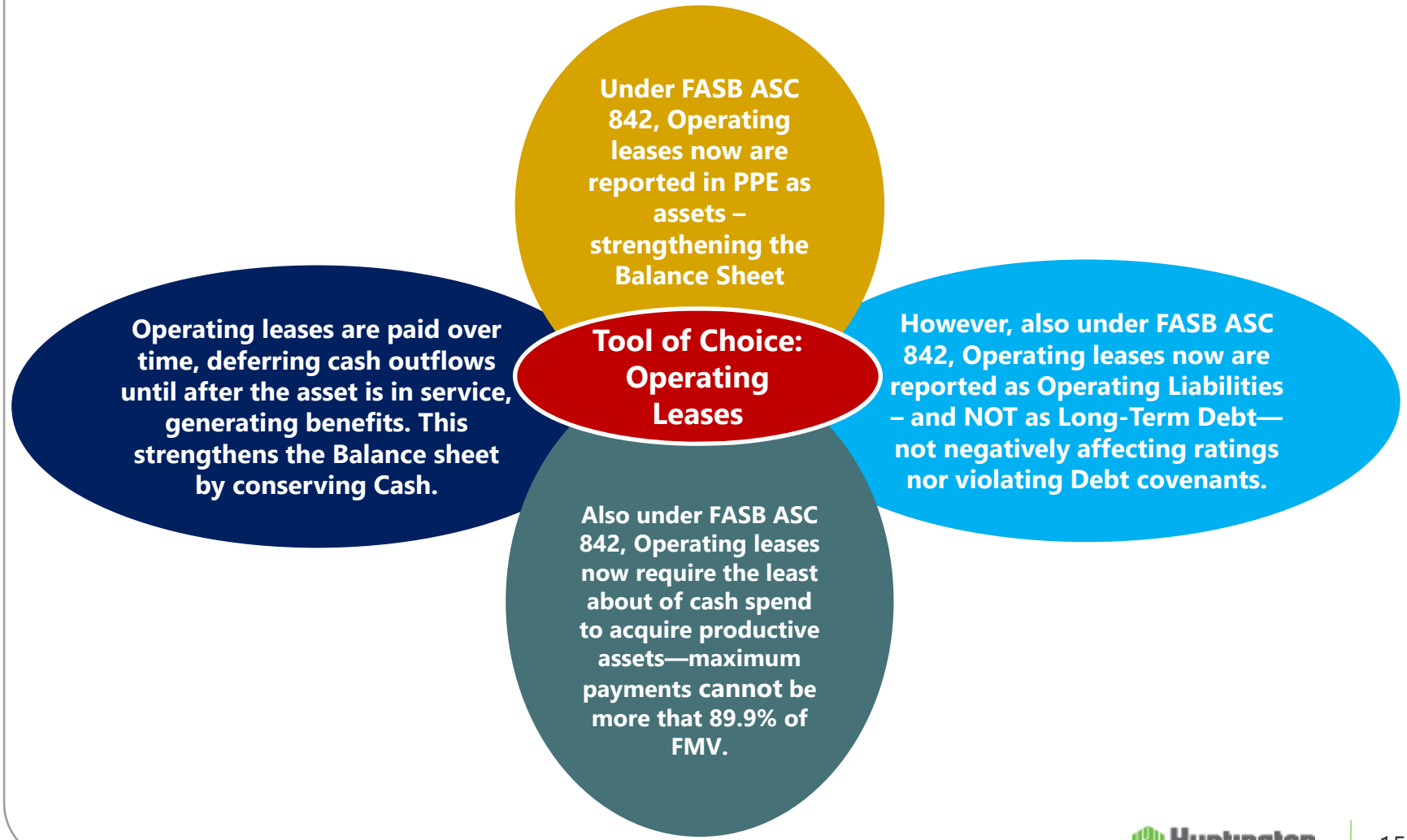
Reclaimed Costs, Lease & Migration Expenses, and Net Savings



Reclaimed: TCO costs eliminated + Book/Cash savings from Unplanned Refresh
Spend: Lease costs plus migration expenses

Proposed Refresh Strategy

Best blend of values for strategic goals and/or possible M&A scenarios:



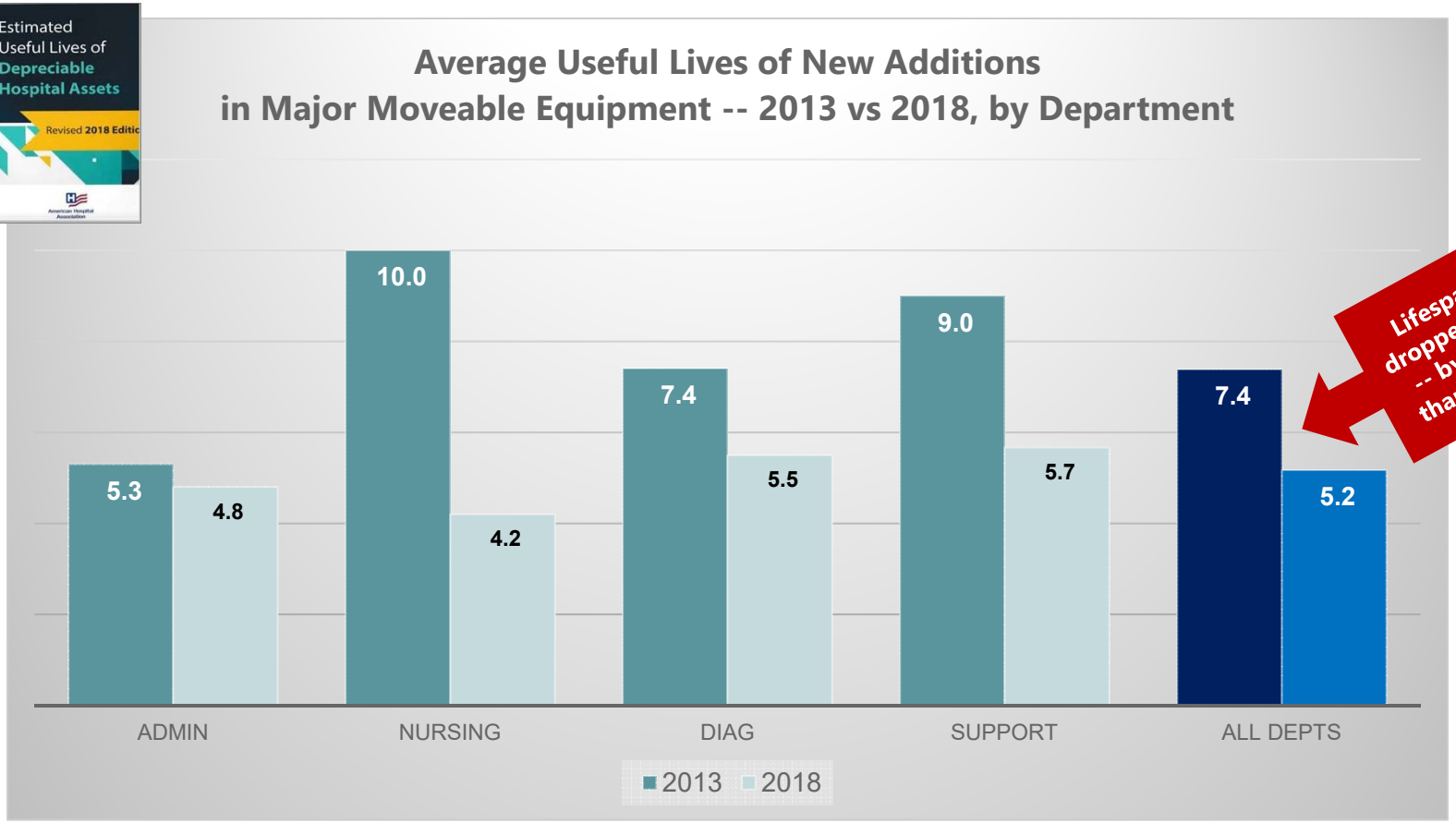
Proposed Refresh Strategy

Will also make major contributions toward these organization goals:

- Cost reduction to support better technology advancements
- Be workplace of choice
- Build consistency across all hospitals
- Improve IT results while improving service levels and employee morale
- Reduce technology attack surface (removal of aged systems)
- Improve compatibility of installed technology with EPIC
- Create platform for asset management communication between departments
- Enhance internal asset management success
- Allow flexibility to use OPEX or CAPEX
- Create financial framework (and familiarity with that framework) to be able to use it for other devices than strictly IT – e.g. medical devices, as their Useful lives shorten with technology innovation

Newer Medical Technologies Have Shorter Lives

Most newer medical devices have useful lives 6 years or less

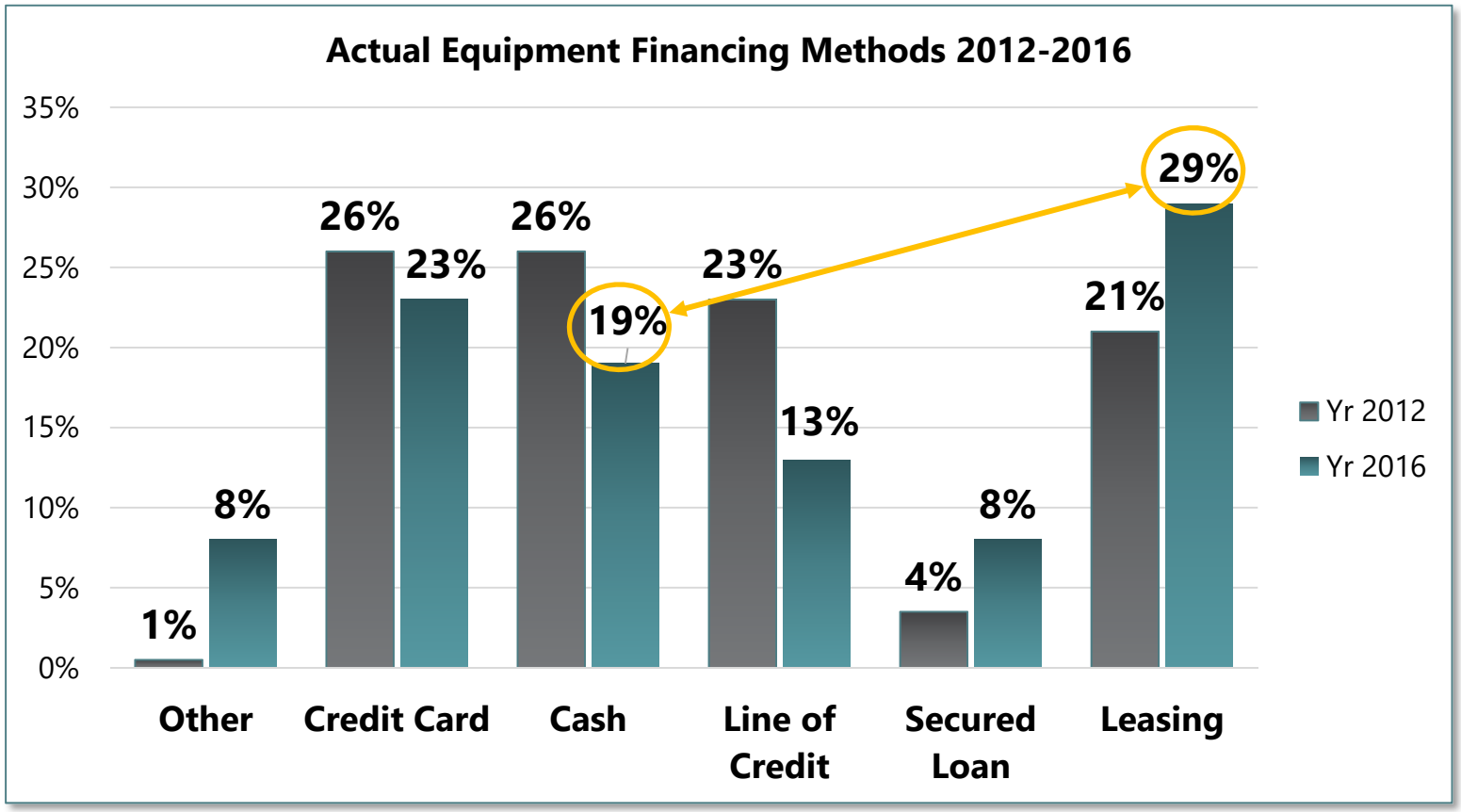


Comparison: Useful Lives of New Equipment Additions 2018 versus 2013

Proposed Refresh Strategy: Optimal Tool

The Dominant tool for equipment acquisition and management:

Lease finance has overtaken cash usage in just four years



Source: IHS Markit. U.S. Equipment Finance Market Study: 2016-2017. Equipment Leasing & Finance Foundation, n.d. Print. Page 7, Figure 1B (source given inside Figure: 2012 and 2016 Foundation Borrower Surveys).

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