

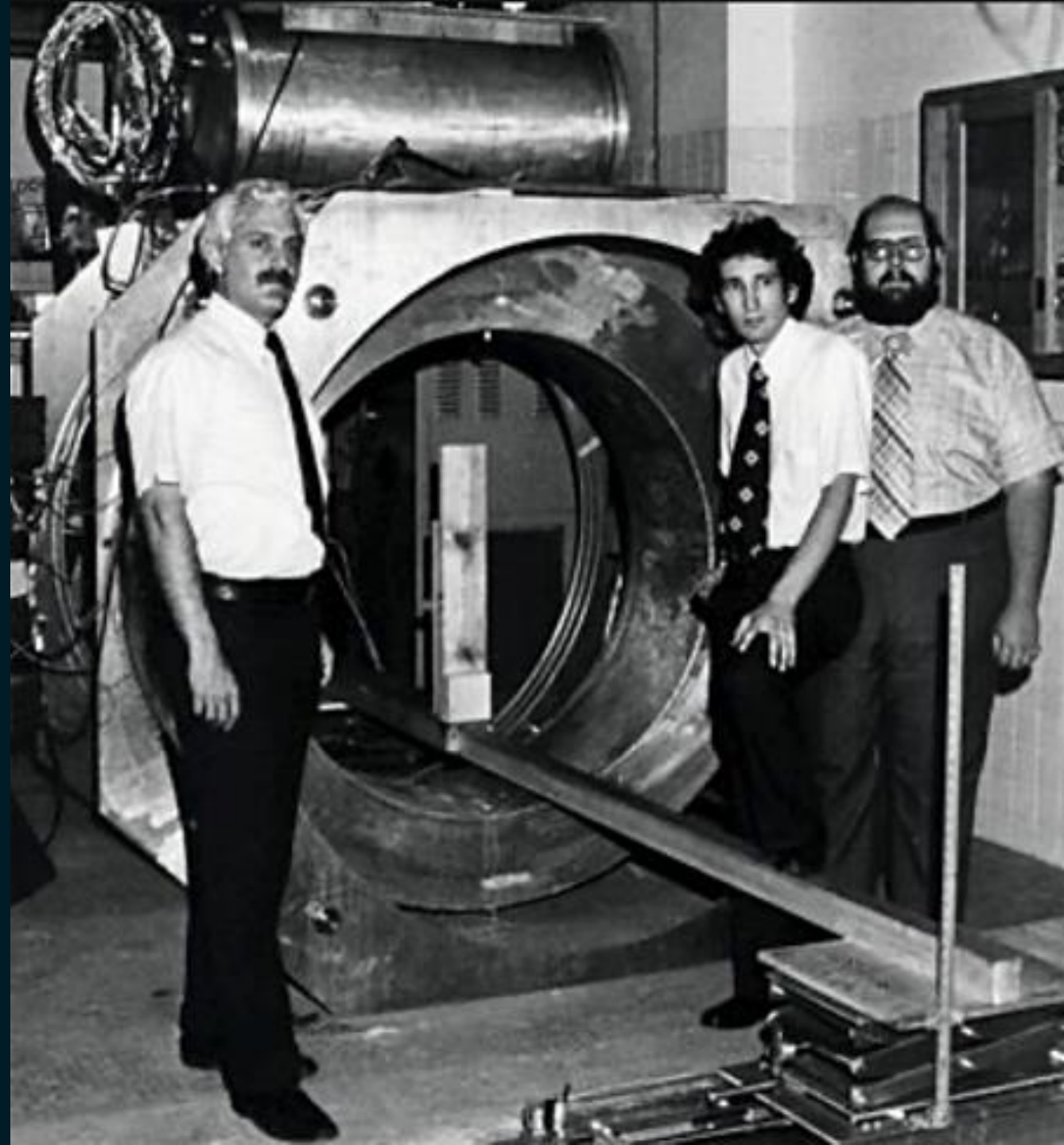


From the Boiler Room to the Board Room

Communicating VALUE with Non-Facility Leadership

An Introduction to Strategic Asset Management

Wednesday, March 15, 2023



Mark Mochel, MBA, CHFM, PMP, ACABE

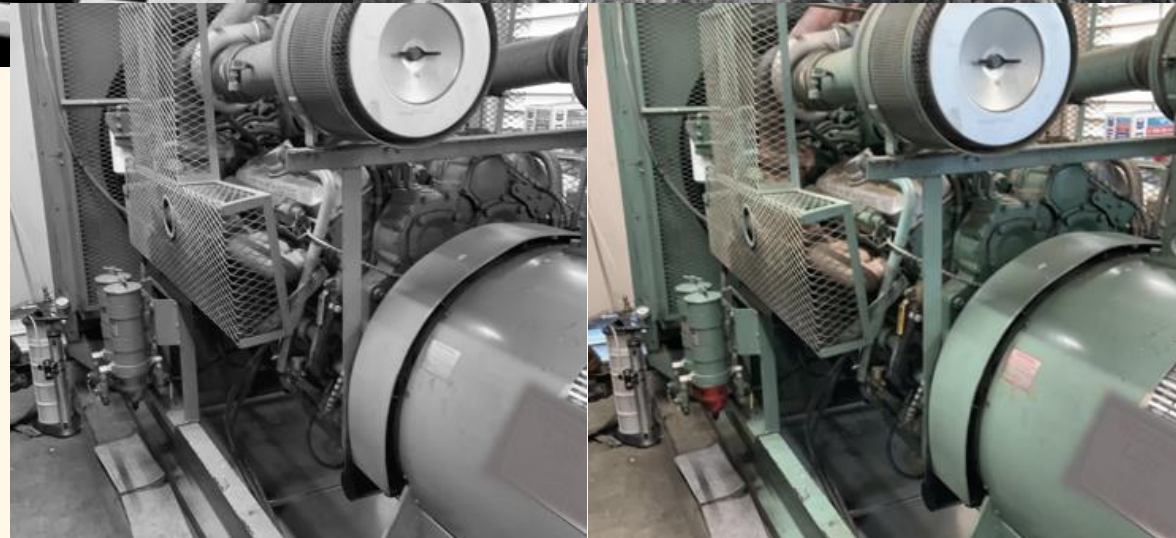
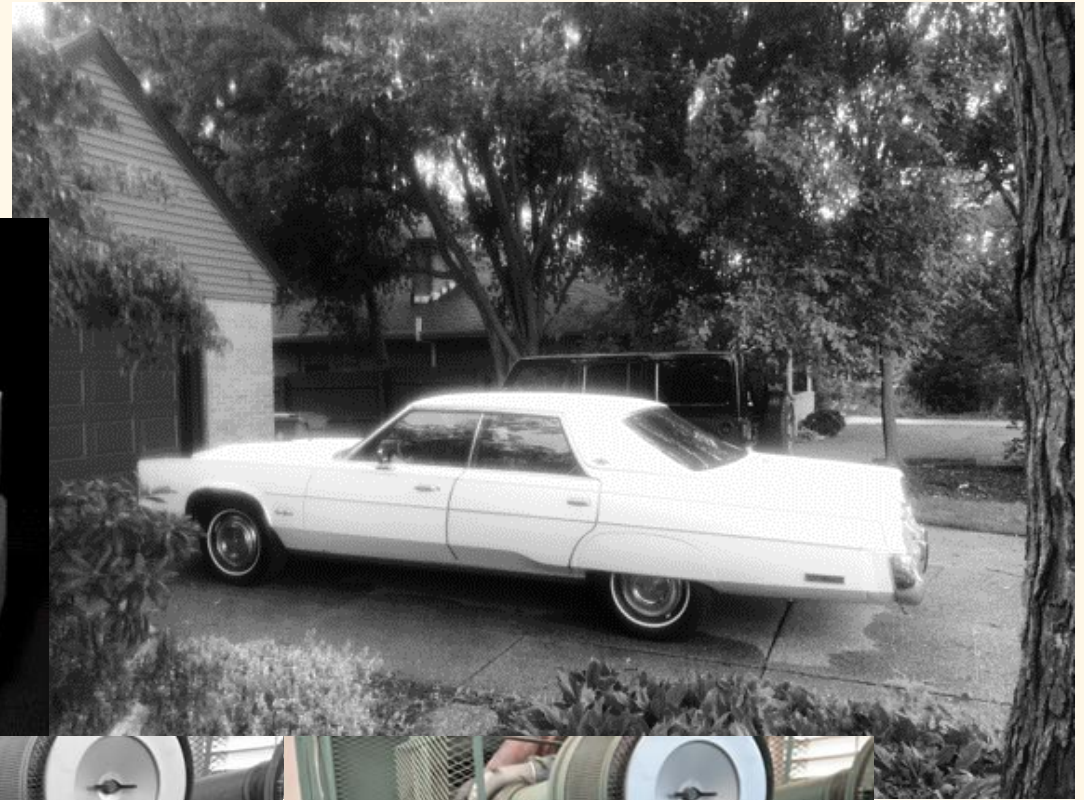


**Strategic Account Executive
Brightly, a Siemens company**

Phone: 616-914-2246

Email: mark.mochel@brightlysoftware.com

The year is 1977....



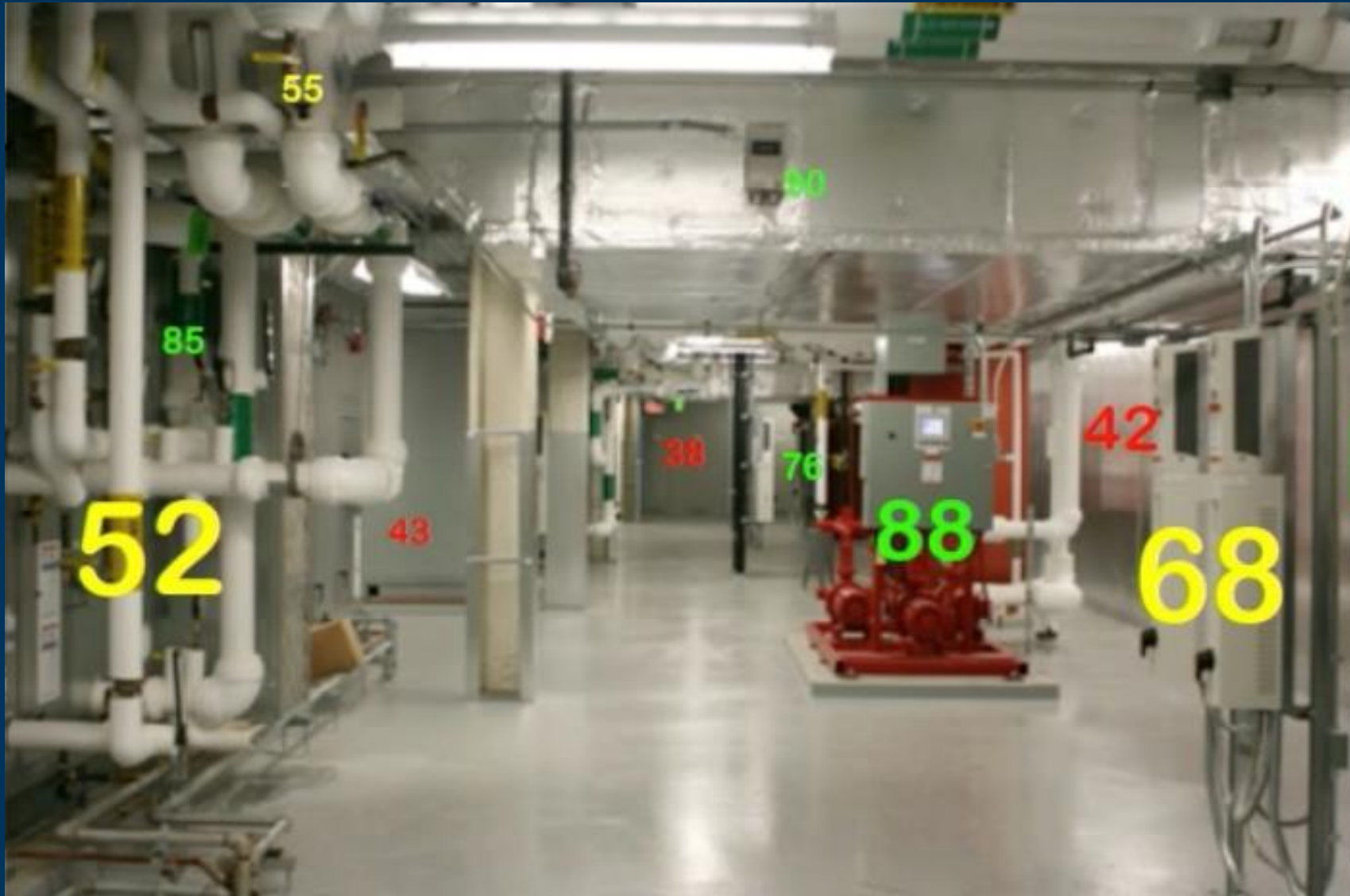
Strategic Asset Management (SAM) involves the management of the maintenance of physical assets of an organization throughout each asset's lifecycle.

People, Process, Technology

AKA: Enterprise Asset Management (EAM)



Individual Assets



Enabling Optimized Healthcare and Senior Living Facility Operations.

TheWorxHub

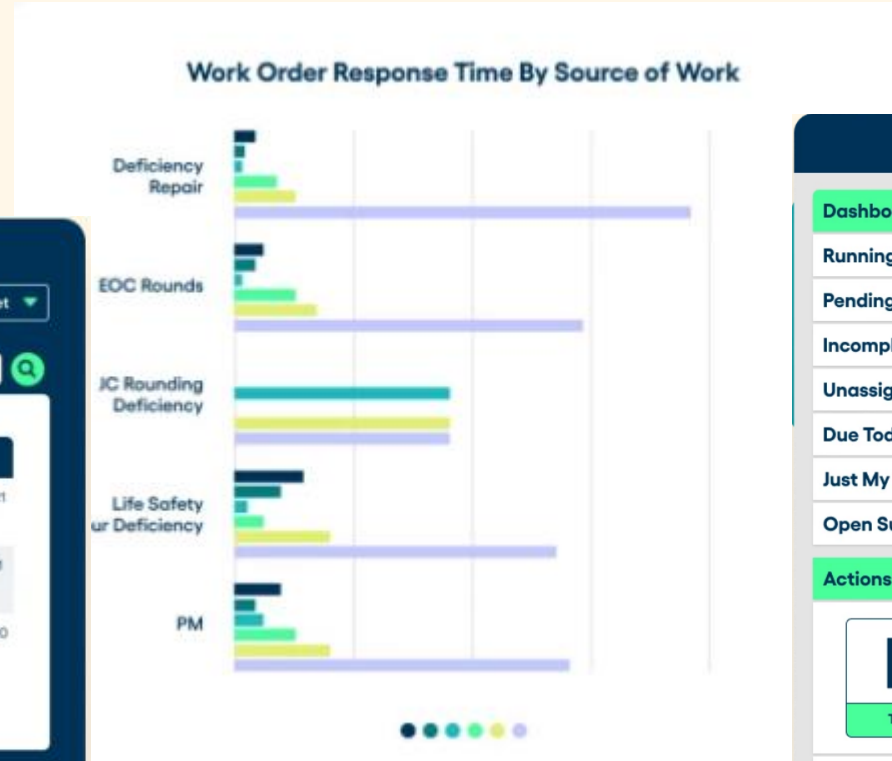
Generator 006
Model Number: 98A01627-S
S/N : 2040945
Exterior > Maple Maintenance Shed

+ New PM Schedule + New Work Order + New Asset

Asset Info Work Orders Scheduled

Sched#	Scheduled Name	Recurrence	Last Gen	WO#	Complete	Next
193	Annual Emergency Generator Inspection (Diesel)	Occurs the first Monday of January every year	Jan 6, 2020	16783	Jan 8, 2017	Jan 4, 2021
280	Monthly Generator Under Load Test (30 minutes)	Occurs day 15 every 1 month until 05/15/16	May 15, 2016	9138	May 6, 2016	Jan 1, 2021
184	Weekly Generator Test	Occurs every 1 week on Tuesday	Jun 23, 2020	40156	Mar 11, 2020	Jun 3, 2020

< 1 2 3 4 >



Dashboard 13.00.02

Dashboard

- Running Timers (0)
- Pending Requests (2)
- Incomplete Work Orders (4)
- Unassigned Work Orders (1)
- Due Today (0)
- Just My Work (1)
- Open Surveys/Inspections (2)

Actions

Tap to Scan Set Preference

Add New Request

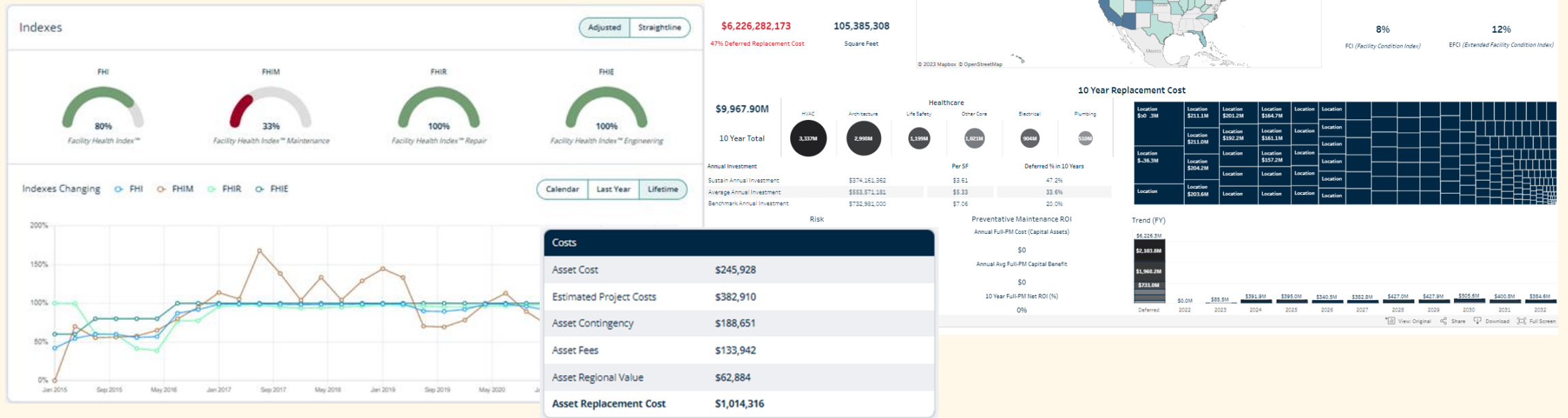
Currently serving 2200+ organizations with over 64 million work orders processed. With >99% uptime, over 280,000 healthcare users trust The WorxHub to manage daily operations.

Computerized Maintenance Management System (CMMS)



Prioritizing Infrastructure Investment. Improving Facility Performance. Mitigating Risk.

Origin



Currently tracking 123,000+ infrastructure assets, serving 105+ Million SQFT and modeling investment needs for an infrastructure portfolio valued at over \$13.1 Billion.

CAPEX and OPEX Budgeting, Forecasting, Strategic Planning



Strategic Asset Management: 1+1=3

TheWorxHub

- Asset Inventory
- Work Order Processing
- Preventive Maintenance Setup and Management
- Rounding
- AEM Program Deployment
- Inspection, Testing and Maintenance

Reporting on **PAST** Performance.

OPERATIONAL INTELLIGENCE
FACILITY PERFORMANCE

&

Origin

- Asset Inventory
- Asset Condition and Risk Ranking
- PAST Work Order and PM Performance modified condition.
- AEM Program Impact
- OPEX and CAPEX Financial Forecasting
- Project Feasibility and Estimation

Forecasting **FUTURE** needs.

STRATEGIC INTELLIGENCE
AUTOMATED FORECASTING



Buckets – Recap



Macro Economics – Our Why

Key Takeaways

1. Hospital margins end year in difficult shape.

Despite modest margin improvements in November and December, suggesting a positive trendline heading into the new year, 2022 was the worst financial year since the start of the pandemic. Approximately half of U.S. hospitals finished the year with a negative margin as growth in expenses outpaced revenue increases.

2. Financial pressures driven by labor expenses.

Hospitals faced prolonged increases in labor expenses last year. The increases were driven in part by a competitive labor market, as well as hospitals needing to rely on more expensive contract labor to meet staffing demands. Increased lengths of stay due to a decline in discharges also negatively affected hospital margins.

3. Outpatient settings see increased volume.

The front door of the hospital continues to shift away from the emergency department. Hospitals experienced increased outpatient volumes, including in surgical settings.

4. Success in 2023 tied to learning lessons of '22.

Expense pressures are unlikely to recede in 2023. Hospitals that embrace better workforce management strategies, secure more stable supply lines, and more effectively negotiate with payers are likely to have better financial years in 2023.

Hospitals should also leverage their outpatient footprint and improve relationships with post-acute settings to maximize current patient volume trends.

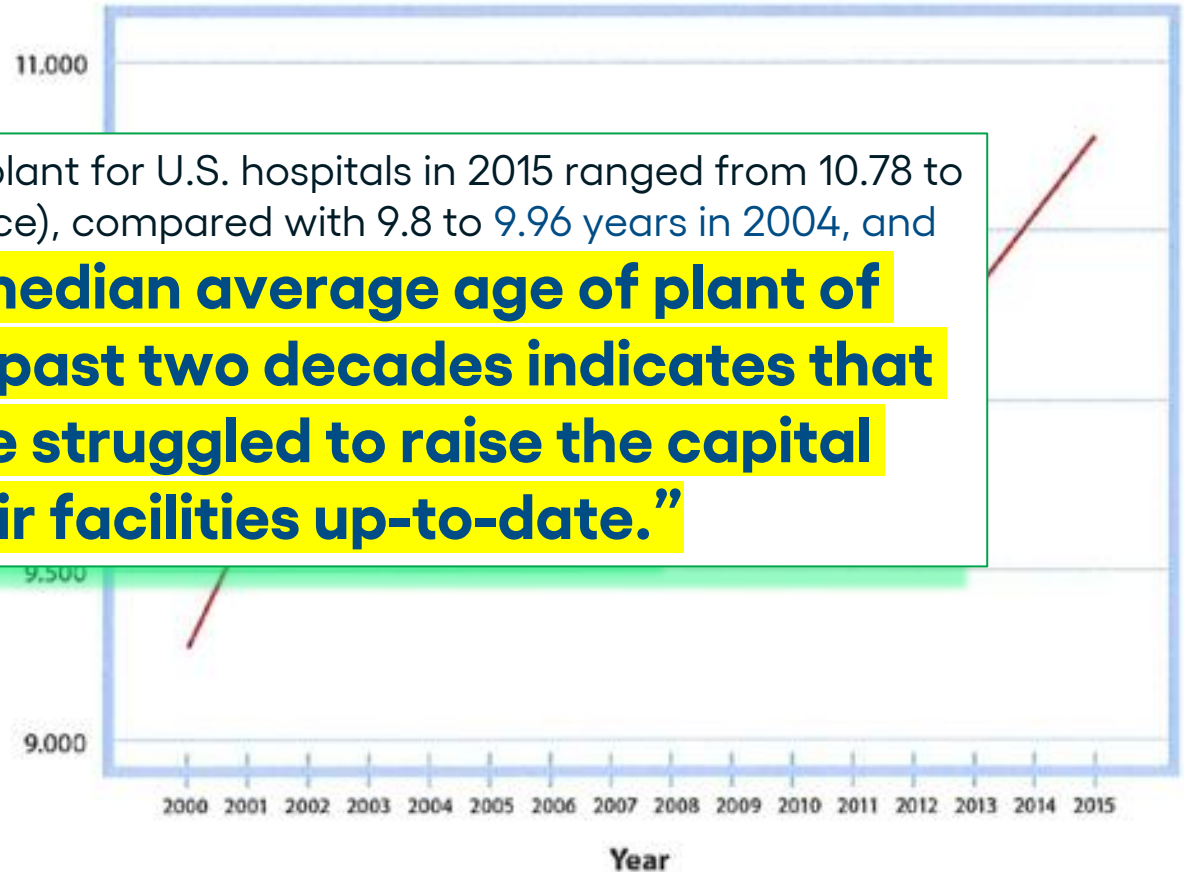


“For example, the median average age of plant for U.S. hospitals in 2015 ranged from 10.78 to 11.48 years (depending on publishing source), compared with 9.8 to 9.96 years in 2004, and 8.6 in 1994.....

This increase in median average age of plant of nearly three years over the past two decades indicates that hospitals, in general, have struggled to raise the capital needed to keep their facilities up-to-date.”

Vincent Della Donna, and Lisa Walt

AGE OF PLANT STATISTIC 2000-2015

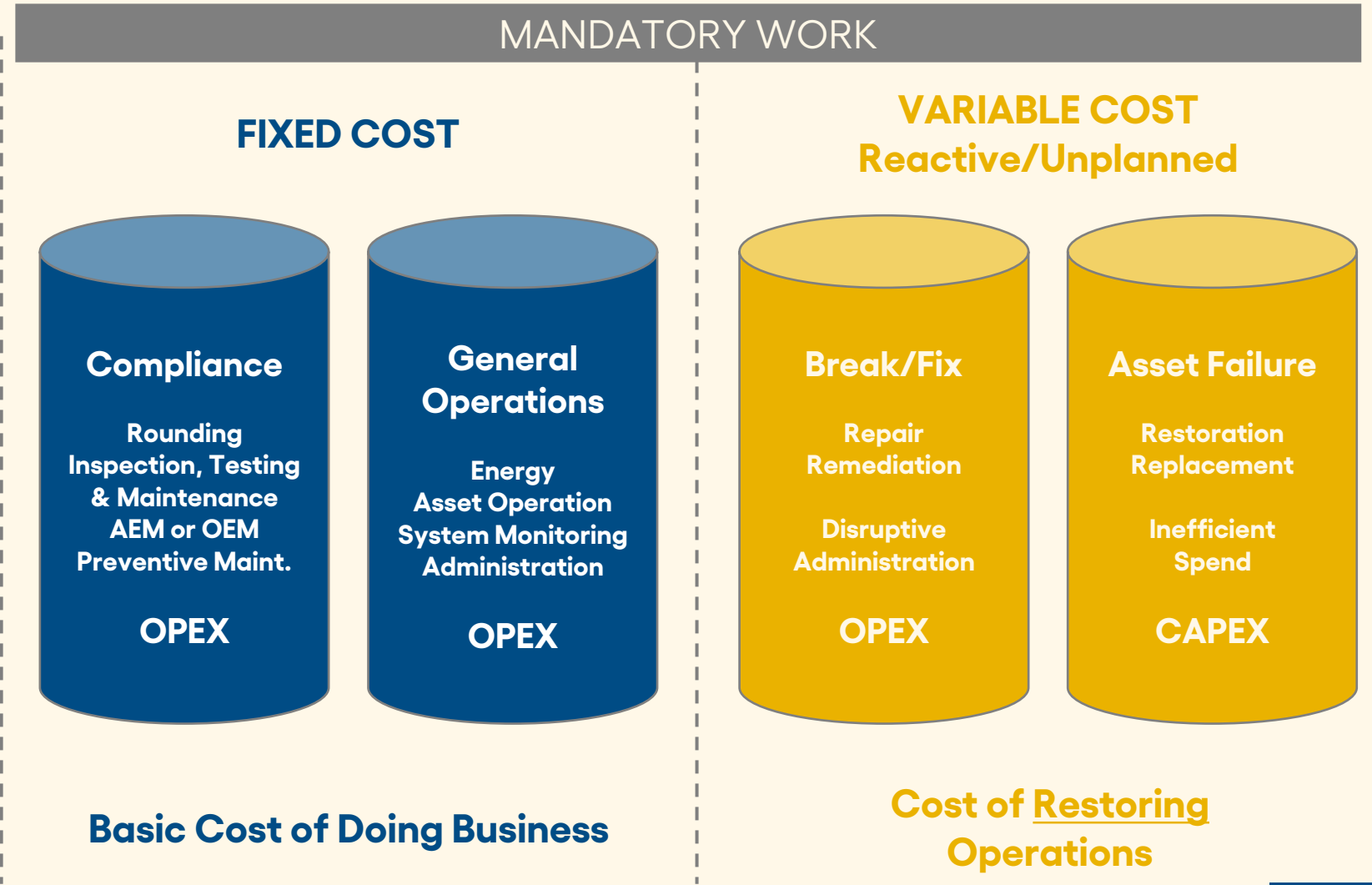


Macro Economics

- Infrastructure investment has been lagging actual needs for over 2 decades. Critical infrastructure continues to age.
- Financial projections indicate that securing and/or allocating needed funds will be more difficult going forward, not easier.
- **Therefore, we must transform our thinking and work to promote the strategic importance of properly funding our facilities.**



TheWorxHub



Origin

TheWorxHub

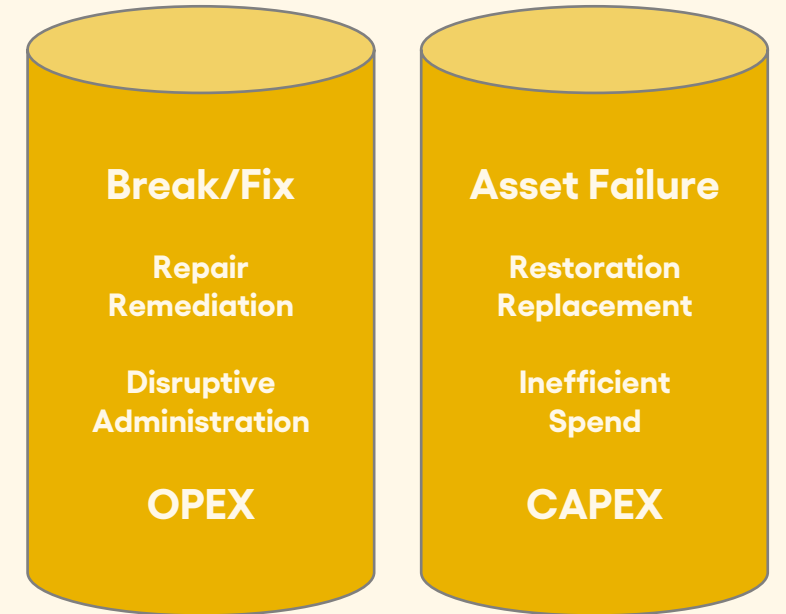
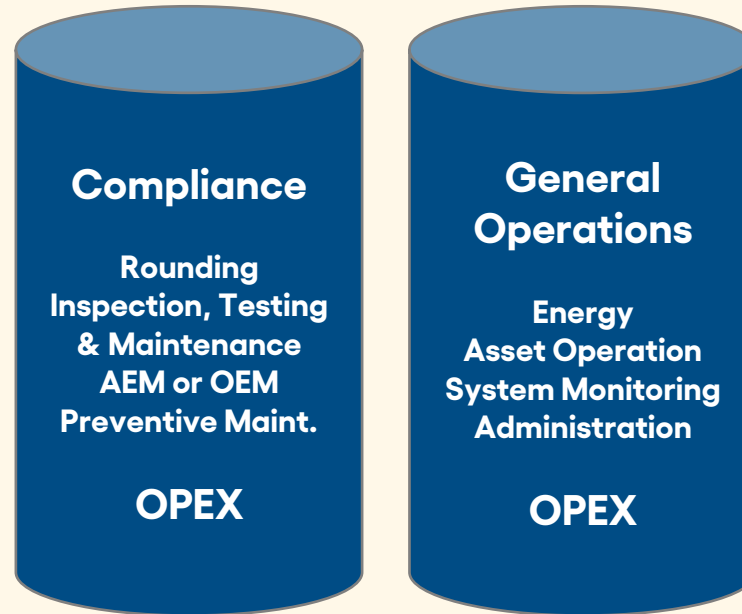
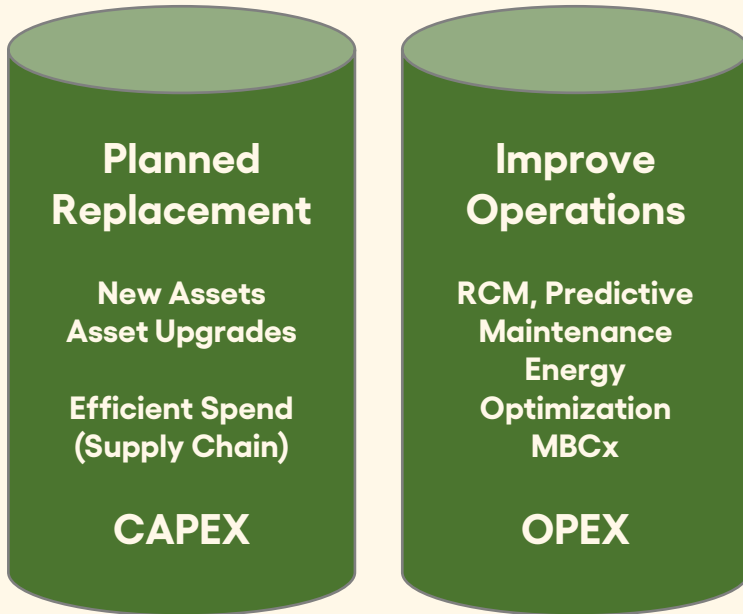
DISCRETIONARY WORK

MANDATORY WORK

VARIABLE COST
Proactive/Planned

FIXED COST

VARIABLE COST
Reactive/Unplanned



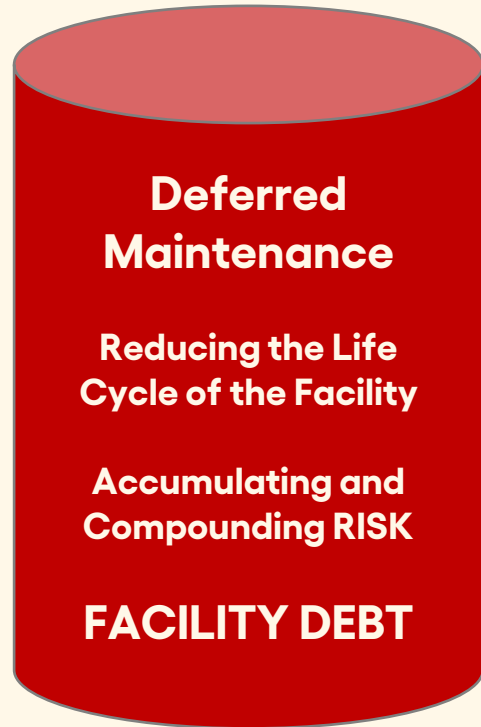
Investment to Protect and/or Enhance Operations

Basic Cost of Doing Business

Cost of Restoring Operations



Deferred Maintenance Defined



- Infrastructure assets that have exceeded industry expected useful life based on age and/or condition.
- These assets are not in imminent failure mode, but indicate an accumulation of risk, and should be evaluated carefully for renovation and/or replacement.
- **Communicating the objective reality of deferred maintenance is not to be feared. It is a continuous reality in any facility.**

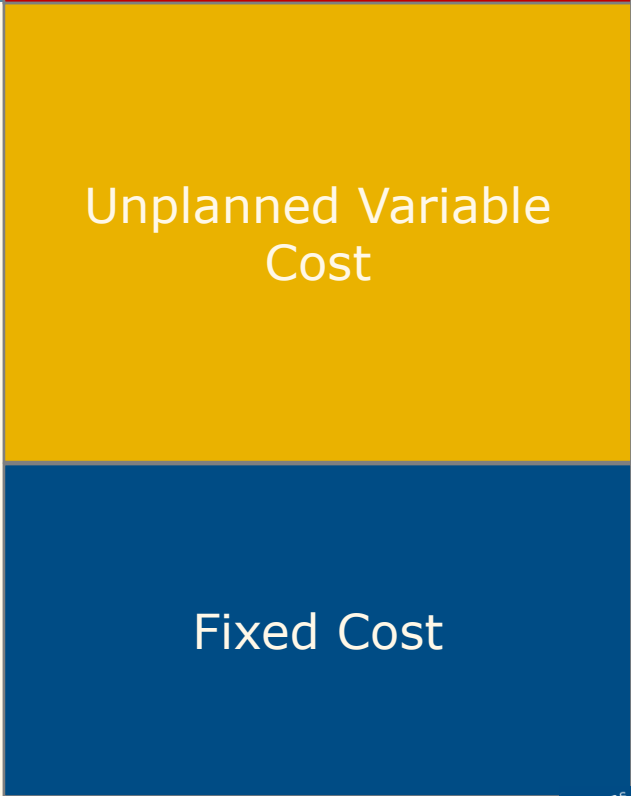
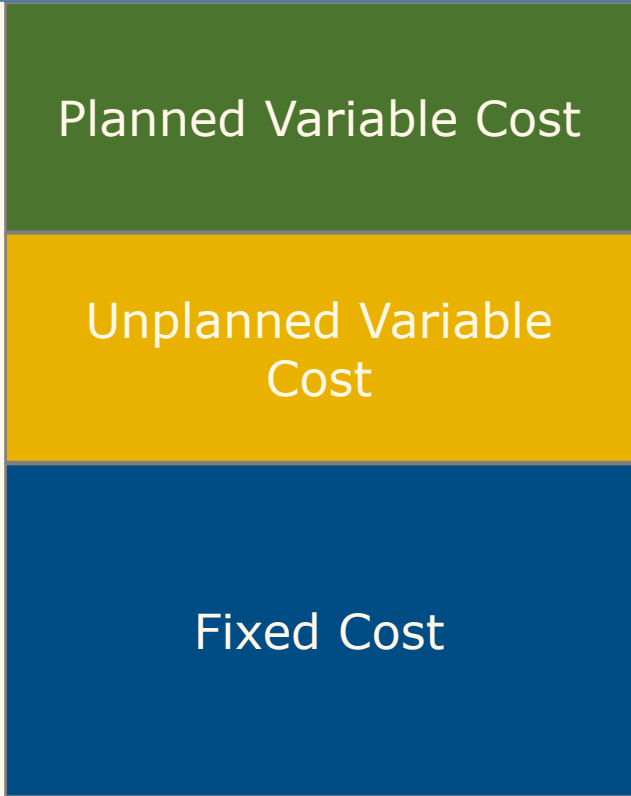


Managed Deferred Investment

Growing Deferred Investment

Failing Facility

BUDGET

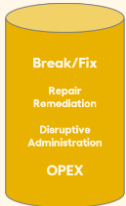
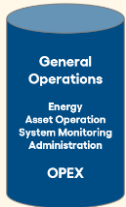


Impact Over Time (years)



Brightly SAM: 1 + 1 = 3

TheWorxHub



- **Asset Inventory**
- Work Order Processing
- Preventive Maintenance Setup and Management
- Rounding
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- Inspection, Testing and Maintenance

Reporting on **PAST** Performance.

**OPERATIONAL INTELLIGENCE
FACILITY PERFORMANCE**

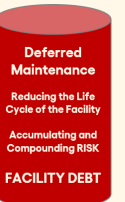
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Origin

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Forecasting **FUTURE** needs.

**STRATEGIC INTELLIGENCE
AUTOMATED FORECASTING**



Finance 101



The C-Suite...

They Don't Get It!

Summary: It's a fact, the C-Suite doesn't speak the same language as the facility management team. They don't understand Air Handlers, Boilers, Chillers etc. But what language do they speak?

They speak in financial terms, monitor the economics of healthcare and will always seek to mitigate financial risks to the institution in any way possible.

It is their fiduciary responsibility to do so.

As stewards of the facility, therefore, it is OUR fiduciary responsibility to teach them about the RISK associated with improper funding of infrastructure maintenance, repair and replacement.



**Facility
Leader**

CFO



What is a Cost Center?

- ***“A cost center is a function within an organization that does not directly add to profit but still costs money to operate, such as the accounting, HR, or IT departments.”***



What is a Cost Center?

- ***“The main use of a cost center is to track actual expenses for comparison to budget.”***



What is a Cost Center?

- ***“The manager for a cost center is only responsible for keeping costs in line with budget and does not bear any responsibility regarding revenue or investment decisions.”***



What is a Cost Center?

- *“A cost center indirectly contributes to a company’s profit via operational excellence, customer service, and enhanced product value.”*



“Price is what you pay, value is what you get.”

Warren Buffet



Challenge Questions

Does your non-facility leadership understand the work that you do?

Does your non-facility leadership understand **the value of** the work that you do?





Sometimes you need to look
at things from a different
perspective.



Pinterest

Unbounded Mind



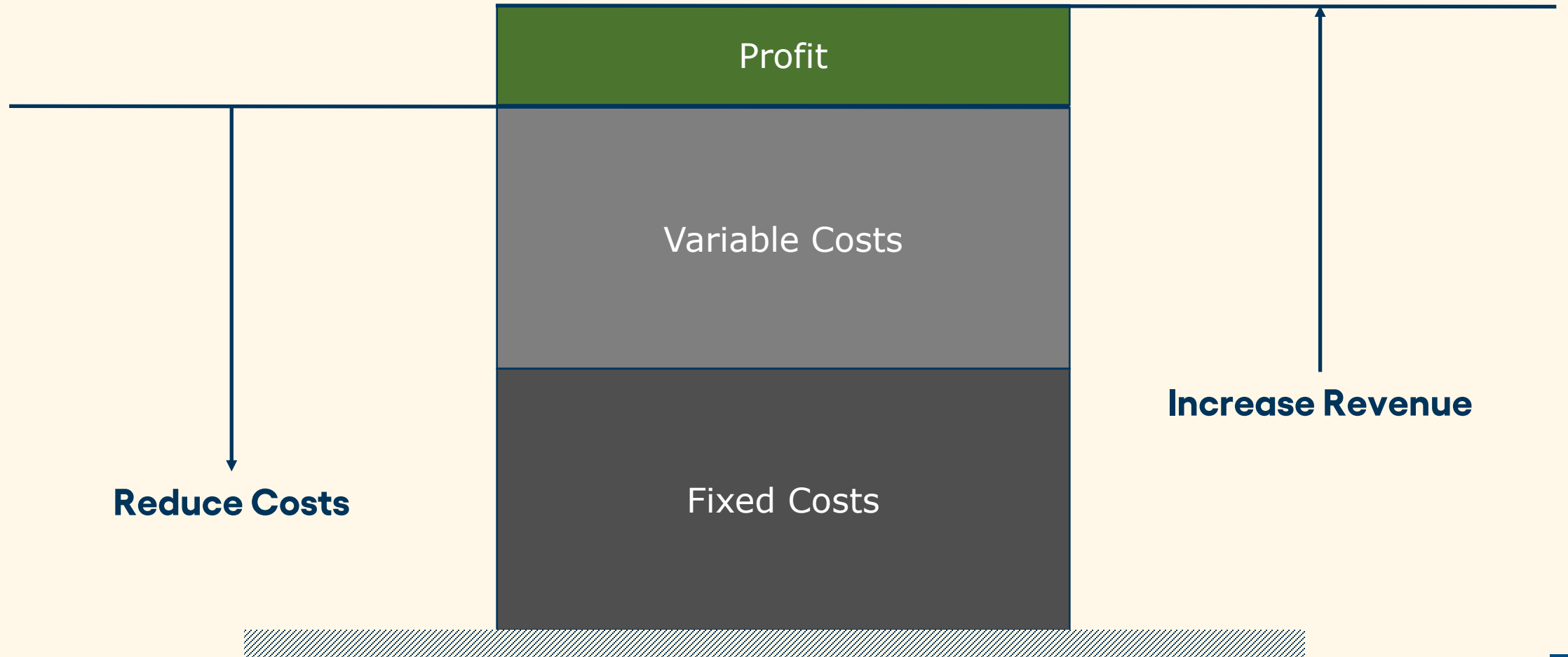
What If?

KEY TAKEAWAYS:

- A profit center is a branch or division of a company that directly adds to the corporation's bottom line profitability.
- A profit center is treated as a separate business, with revenues accounted for on a stand alone basis.
- The opposite of a profit center is a cost center, a corporate division, or department that does not generate revenue.

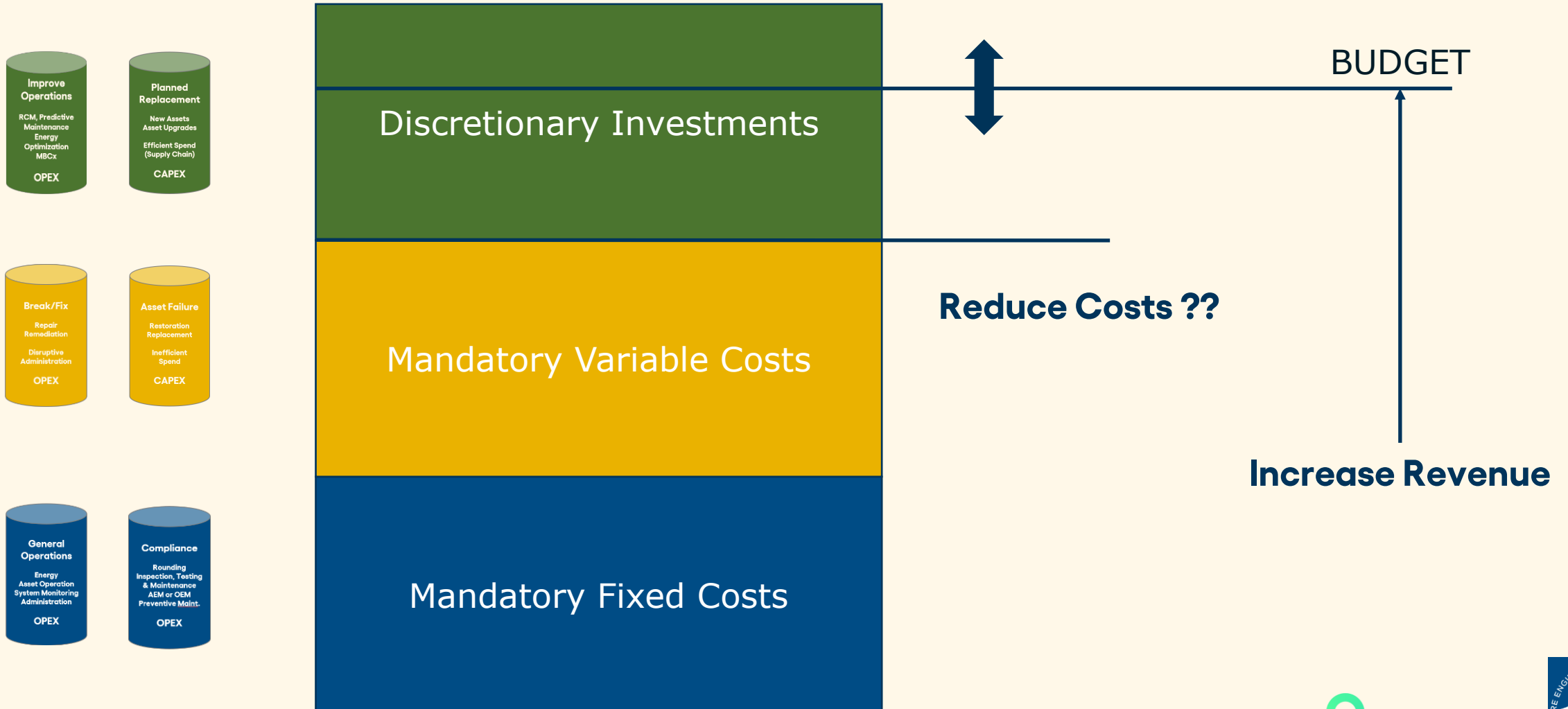


2 Ways to Grow a Business



2 Ways to Manage Your Facility Business

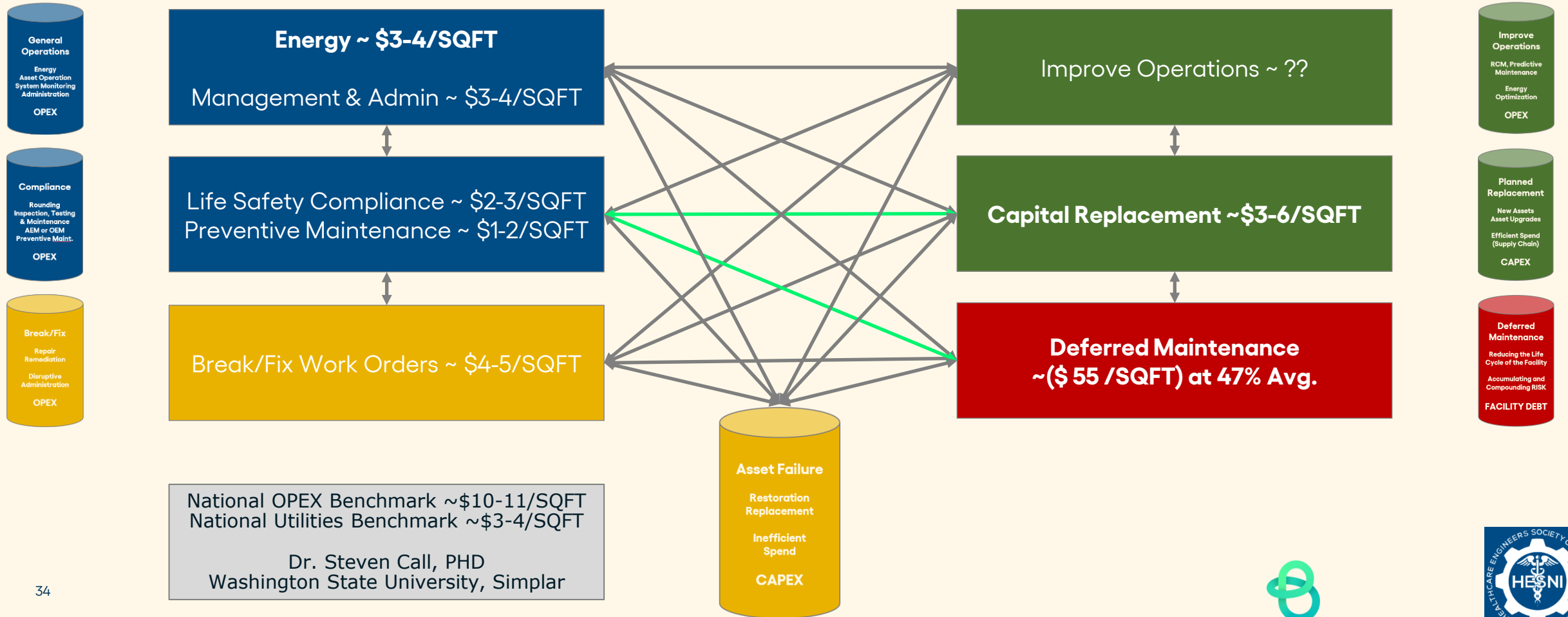
Deferred Maintenance
 Reducing the Life Cycle of the Facility
 Accumulating and Compounding RISK
FACILITY DEBT



By The Numbers



National Estimates Annual Costs Per 1 Million SQFT ESTIMATES



Benchmark Summary (Per 1 Million SQFT)

~ 1300 Assets
~ \$139 M Total Value
~ \$56 M Deferred

Capital Investment Needs
\$3-6 M Annually

PM Needs
\$500K - \$1M Annually

Compliance

Rounding
Inspection, Testing
& Maintenance
AEM or OEM
Preventive Maint.

OPEX

**Improve
Operations**

RCM, Predictive
Maintenance

Energy
Optimization

OPEX

**Deferred
Maintenance**

Reducing the Life
Cycle of the Facility

Accumulating and
Compounding RISK

FACILITY DEBT

**Planned
Replacement**

New Assets
Asset Upgrades

Efficient Spend
(Supply Chain)

CAPEX



Impact of PM (or not!)

Equipment	EUL (Years)	EUL Degradation	PM Cost	RM Cost	Energy Efficiency Degradation	Replacement Cost
Air compressor	20	20%	\$472	\$236	35%	\$4,700/HP
Air handler	20	20%	\$501	\$193	50%	\$1/cfm
Boilers	30	20%	\$691	\$2,121	7%	\$20/MBH
Centrifugal chillers	23	36%	\$5,500	0	23%	\$1,000/ton
Reciprocating chillers	20	36%	\$4,400	0	23%	\$1,000/ton
Cooling towers	20	20%	\$300	0	35%(chiller efficiency)	\$90/ton
Condensers (air cooled)	20	20%	\$204	\$188	30%	\$290/ton
DX units	15	50%	\$200	\$1,600	20%	\$1,200/ton
Early-warning fire detection (EWFD) systems	15	20%	\$534	0	N/A	\$150/detector
Centrifugal pumps	20	20%	\$102	\$891	N/A	\$2,110/hp
Fire pumps	20	20%	\$1,650	\$891	N/A	\$40,000
Switchgear	30	10%	\$27	\$21	N/A	\$11,000
Parking lots	100	90%	\$0.07/sf	0	N/A	\$2.46/sf
Roofs	20	25%	\$0.12/sf	0	N/A	\$10/sf
Weatherproofing	75	50%	\$0.33/sf	0	N/A	\$18/sf

“EUL degradation is the percentage of EUL lost if preventive maintenance is not performed.”

Source: Determining the Economic Value of Preventive Maintenance; Jones Lang Lasalle; Wei Lin Koo, Tracy Van Hoy, P.E. 2016



10 Year Replacement Cost

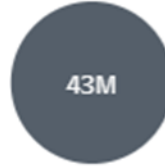
Preventative Maintenance

- Actual PM (Adjusted)
- Optimum PM (100%, SL)
- Worst Case PM (0%, SL)

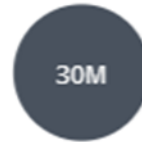
\$99.77M

10 Year Total

Architecture



HVAC



Life Safety



Healthcare

Other Core



Electrical



Plumbing



10 Year Replacement Cost

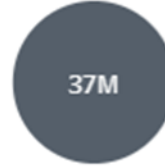
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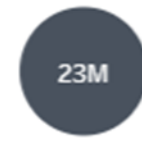
\$78.58M

10 Year Total

Architecture



HVAC



Life Safety



Healthcare

Electrical

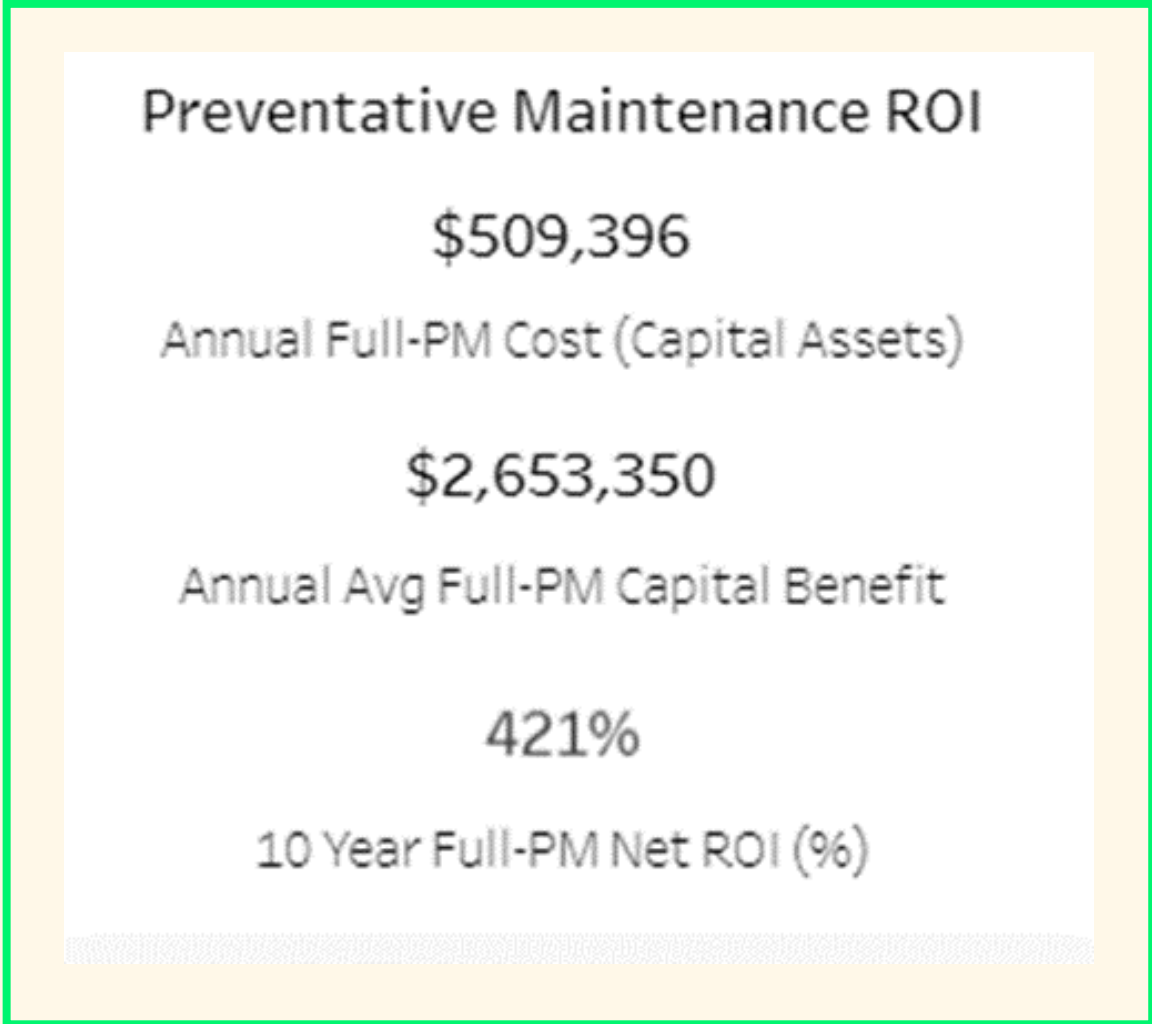


Other Core



Plumbing





**Communicating Value
(Sales?)
Who is your customer?**





Transparency Leads to Credibility

Educate Your Customer



Campus

- Level I Trauma Center
- 1.5 Million Square Feet
- 13 Levels + Basement
- Built in 1963
- 490 Beds
- 23 Operating Rooms

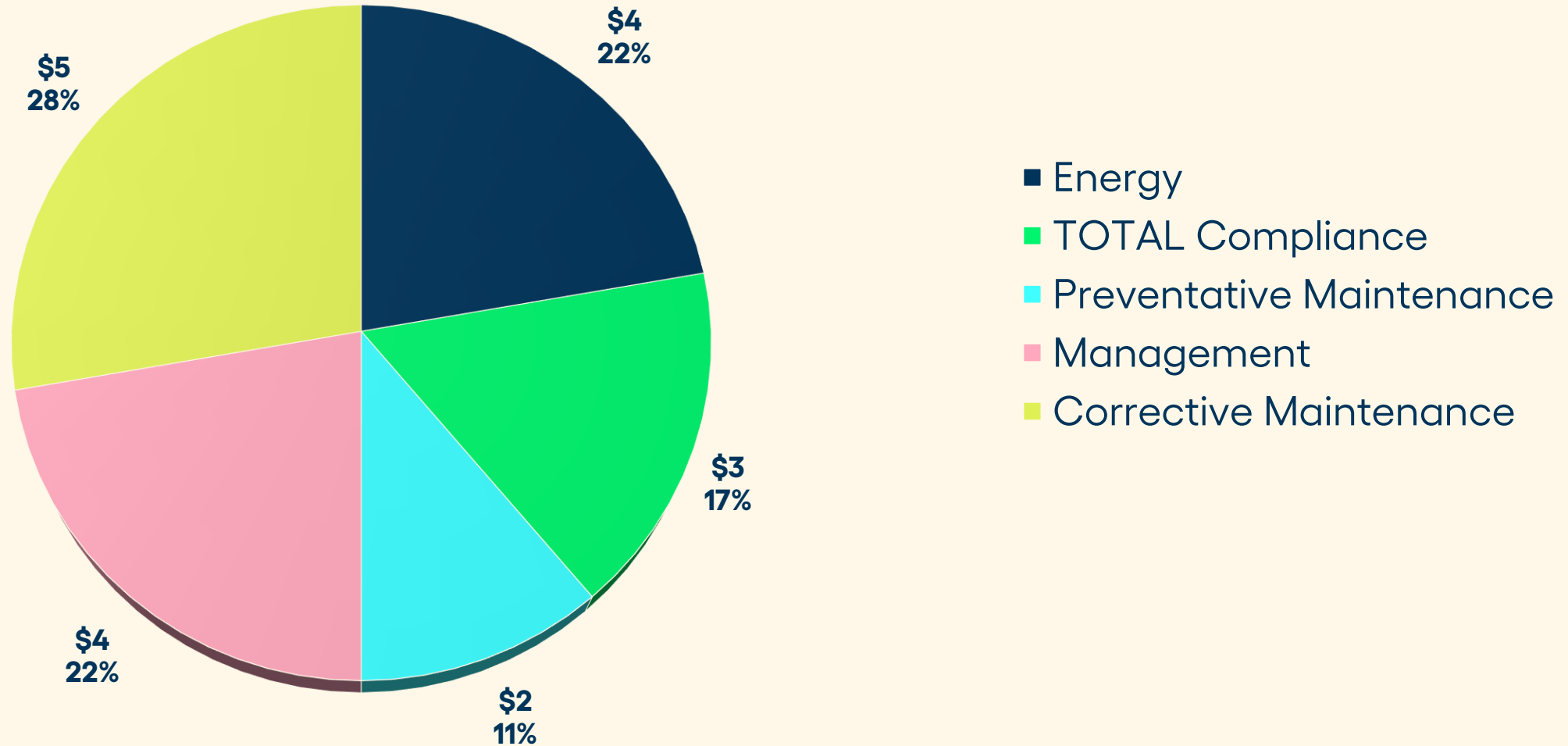


Compliance Cost Examples – First Cut

Emergency Power	\$35,844.00	Eyewashes	\$4,508.00
Annual/Triannual Generator	\$56,000.00	Rated Openings	\$28,105.00
Exit Signs	\$8,100.00	Fire & Smoke Dampers	\$49,296.00
Emergency Lighting	\$2,088.00	Elevator Maintenance & Testing	\$45,355.00
LIM Panels	\$28,348.00	Water Management	\$4,255.00
Backflow Preventers	\$9,480.00	Ventilation Requirements	\$46,240.00
UST/AST	\$10,500.00	Boilers Maintenance & Testing	\$19,244.00
Medical Gas & Vacuum	\$15,975.00	Joint Commission Accreditation	\$120,000.00
Fire System	\$727,503.00	Life Safety Assessments	\$79,705.00
Lightening Protection	\$6,850.00	3 FTE's	\$273,000.00
Tie-Offs	\$12,300.00	Rounding	\$13,104
Ice Machines	\$21,896.00	EOC Committee	\$10,384
Fire Extinguishers	\$36,000.00		



Operational Budget \$/SQFT

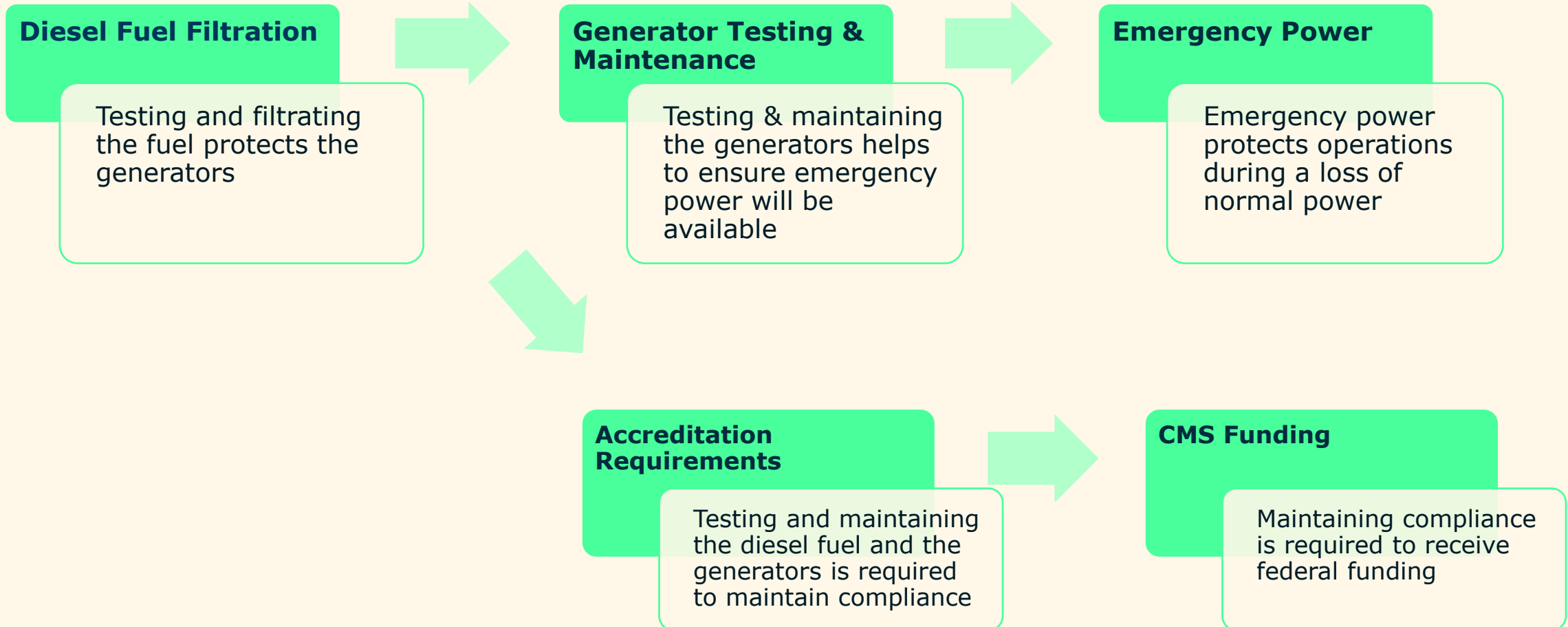


Credibility Leads to VALUE

Engage Your Customer



Value Chain



Creating a Value Chain

XYZ Major Health System - Diesel Fuel Value Chain

Macro Data	22,300,000 SQFT - 29 Accredited Hospitals + Non-Acute		
Number of Fuel Tanks	114 of All Sizes, Shapes and Capacities		
Total Amount of Fuel	426,632	gallons	Value Multiplier (ROI?)
Fuel Treatment @ \$0.13 Per Gallon All In	\$ 55,462	\$0.002 per SQFT	NA
Replacement Cost of Fuel at \$5/gallon	\$ 1,706,528	\$0.077 per SQFT	39
Total Replacement Cost of Assets Utilizing Fuel	\$ 67,043,186	\$3.06 per SQFT	1530
Total Liability/Revenue Impact	?????	\$\$\$\$ per SQFT	Infinite



Creating a Value Chain

Single Campus - Diesel Fuel Value Chain

Macro Data	1.5 Million SQFT Single Campus		
Number of Fuel Tanks	1 Large CUP Tank, 2 Auxiliary Tanks, 5 Day Tanks		
Total Amount of Fuel	22,590	gallons	Value Multiplier (ROI?)
Fuel Treatment @ \$0.13 Per Gallon All In	\$ 2,937	\$0.002 per SQFT	NA
Replacement Cost of Fuel at \$5/gallon	\$ 112,950	<i>\$0.075 per SQFT</i>	<i>38</i>
Total Replacment Cost of Assets Utilizing Fuel	\$ 7,540,912	<i>\$5.03 per SQFT</i>	<i>2568</i>
Total Liability/Revenue Impact	?????	\$\$\$\$ per SQFT	Infinite



VALUE Leads to Inclusion

Partner With Your Customer



Mission, Vision and Values

Our Mission: Make life better for children

Our Values

Selfless Service

Serving others with an enthusiastic spirit

Passionate Advocacy

Standing as champions for children

Commitment to Excellence

Driving innovation and quality care to maximize outcomes

Unwavering Integrity

Creating an environment of trust through honesty, transparency and authenticity



Mission, Vision and Values

Sustainability Program

[Redacted] is committed to making life better for children now and in the future by promoting sustainable practices and creating healthier facilities through safer products, reduced air emissions, less waste, and efficient use of energy and water.



“Our mission is to make life better for children, and we have a responsibility to help give children the right start in a healthy environment. Reducing our carbon footprint directly contributes to that mission and leaves a healthier planet for future generations.”





JUNE 30, 2022

• **Health Systems, Hospitals and Other Providers**

- Providence Health, HealthPartners, Kedren Health, CommonSpirit Health, University Medical Center of El Paso, NYC Health + Hospitals, Boston Medical Center, Baystate Health, Stanford Children’s Health, Stanford Health Care, Atrium Health, Cherokee Health Systems, University of California Health, Northwell Health, Rush University System for Health, Northern Arizona Healthcare, Hackensack Meridian Health, UW Medicine, RWJBarnabas Health, Sun River Health, NYU Langone Health, Ascension, Henry Ford Health, Mass General Brigham, Boston Children’s Hospital, Tufts Medicine, Southcoast Health, Children’s National Hospital, Mount Sinai Health System, Kaiser Permanente, Keck Medicine of USC, Beth Israel Deaconess Medical Center, Montefiore, Seattle Children’s, Valley Children’s Healthcare, University of Nebraska Medical Center and Nebraska Medicine, Advocate Aurora Health, Gillette Children’s, University of Utah Health, Steward Health Care System, DaVita

...commitments advance President Biden’s goal to reduce nationwide greenhouse gas emissions 50-52% in 2030 and reach net-zero emissions in 2050.

Factor Leaders on’s Pledge to s Emissions

D RELEASES

and Lower Costs

at 61 of the largest U.S. he Administration’s ice greenhouse gas ent over 650 hospitals and include plans to ic health, and lower missions, so these bold



Infrastructure VALUE

What is it?

What does it do?

Why is it important?

What is the RISK or IMPACT if it fails?

How does it align with other strategic initiatives?



WIIFM

- What's In It For Me?

What is most important to your leadership?



Questions?





Thank you