



# Health Futurist Applied Sustainability

Helen Wilmot  
Sr Vice President  
Chief Facilities, General Services &  
Sustainability Officer



Stanford  
MEDICINE

Health Care  
SUSTAINABILITY

## About the Speaker

**Helen Wilmot, Senior Vice President**

**Chief Facilities, General Services & Sustainability Officer**



- ✓ A multi-faceted career from patient care, to consulting (*in the days when leaving on Monday morning and coming home on Friday was standard procedure!*), to starting a venture backed software company, to health care executive leadership. Executive leadership across the full breadth of planning and strategic operations of health care delivery systems.
- ✓ Current focus is leader for the non-clinical operations at Stanford Medicine. 2Msf of facilities (125 locations across SF Bay Area), hospitality services, engineering, security, space management, all construction, and sustainability.
- ✓ Identified as a leader that can move through the full continuum of strategy, planning, operations, and execution. And a skilled integrator of thought and convenor across disciplines.

### **Select highlights:**

- The lead to activate & open Stanford Health Care's new hospital. 824Ksf, \$2.1B.
- Launched SHC's Sustainability Program Office
- 2Msf, staff of 2,100, \$400M/year construction, \$500M budget



## About the Speaker... Really



# SHC Sustainability Pillars

The five pillars serve as the baseline for all the SHC sustainability activities. The primary focus for the work groups has been GHG, energy, and waste



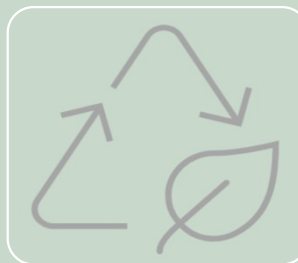
## Greenhouse Gas Emissions

- Reducing the GHG emissions associated with the necessary activities to deliver care



## Energy Management

- Reducing the energy use intensity of care delivery



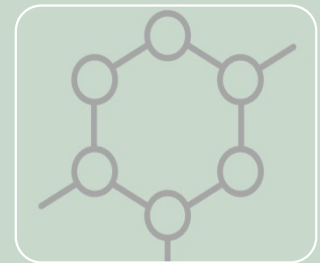
## Waste Prevention

- Reducing the amount of waste produced and actively sorting that which does exist



## Water Conservation

- Reducing the water use intensity of care delivery



## Chemicals of Concern

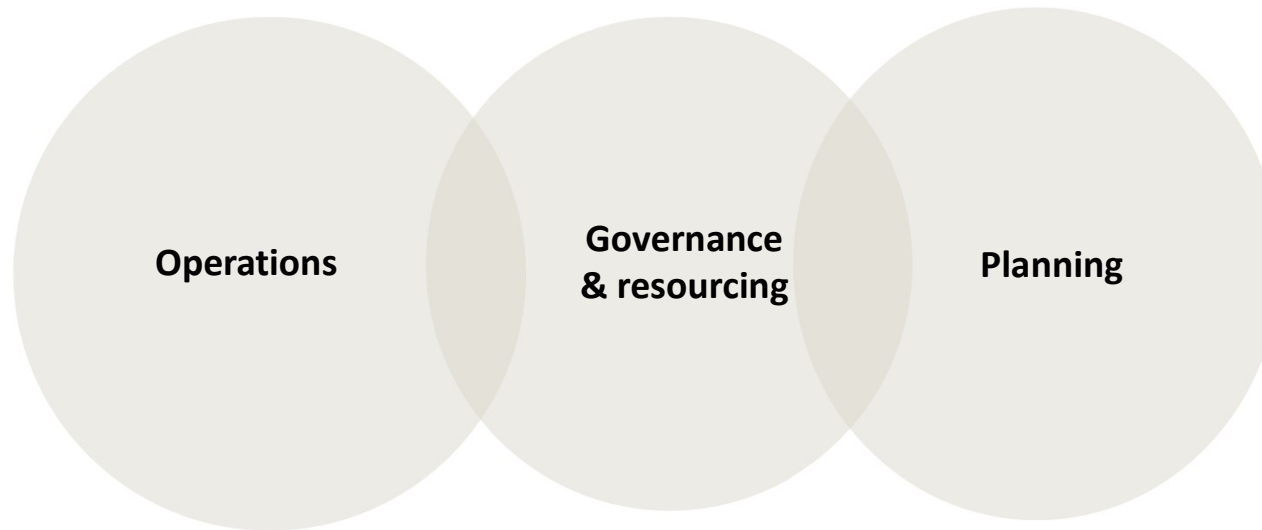
- Reducing the presence of chemicals of concern in the healthcare environment



**Making an *impact* without making a *statement***

# Integration across the continuum

The key is the iterative flow between planning and operations. The programmatic work cannot be “thrown over the transom”, endorsement comes from the joint voice.



## **Implementation**

- Operations plans
- In-the-field training
- Integration w/clinical & ops

## **Programmatic**

- Finance/ROI
- Engagement & endorsement

## **Initiatives**

- Project mgmt
- Sustainability & technical experts
- Results & tracking

# Integration across operations, construction & planning

The ability to drive sustainability is the ownership and the integration– initiative driver, governance influence, platforms of engagement and move to execution.



## Hospitality

Food services  
Housekeeping  
Patient transport  
Patient equipment management  
Facility management



## Facilities Infrastructure, Safety & Security

Hospital Project Management Office  
Environmental Health & Safety  
Facilities Engineering  
Hospital facilities maintenance  
Security  
Facilities call centers



## Site Support Services

Clinics and administrative facilities maintenance  
Clinics and administrative Project Management Office  
Clinics and administrative facility management



## Transportation & Grounds

Parking  
Fleet vehicles  
Transportation demand management  
Grounds maintenance



## Planning Design & Construction

Real Estate  
Medical Planning  
Design  
Construction



## Space Planning

Governance  
Strategic Space Planning  
Space Requests, Moves, Adds, Changes



## Activations & Operational Integration

Activations  
Governance  
Wayfinding & Signage



## Sustainability Program Office

Governance (Sustainability)  
Sustainability initiatives



## Business Operations & Strategic Initiatives

Lease administration  
Contract administration  
Finance/business  
Communications  
Strategic initiatives

## Operations

## Planning



3.5M+ Meals



450K+ Facility Calls



50K+ work orders



2M cars



5M+ soft space



10+ Clinic Activations



41K Metric ton CO2 emissions



430+ Property Leases



250K+ Cleans



50K+ Security Calls



300+ sites



2.5+ Exterior Sq ft



100+ Move Assignments



500+ Signage requests



250K+ Transports



70+ systems, 30K+ assets



21 Active Facilities Governance Groups



\$350M+ Budget



# Challenges and opportunities to activate sustainability

Key challenges to consider in decision making, always staying focused on the ROI when prioritizing

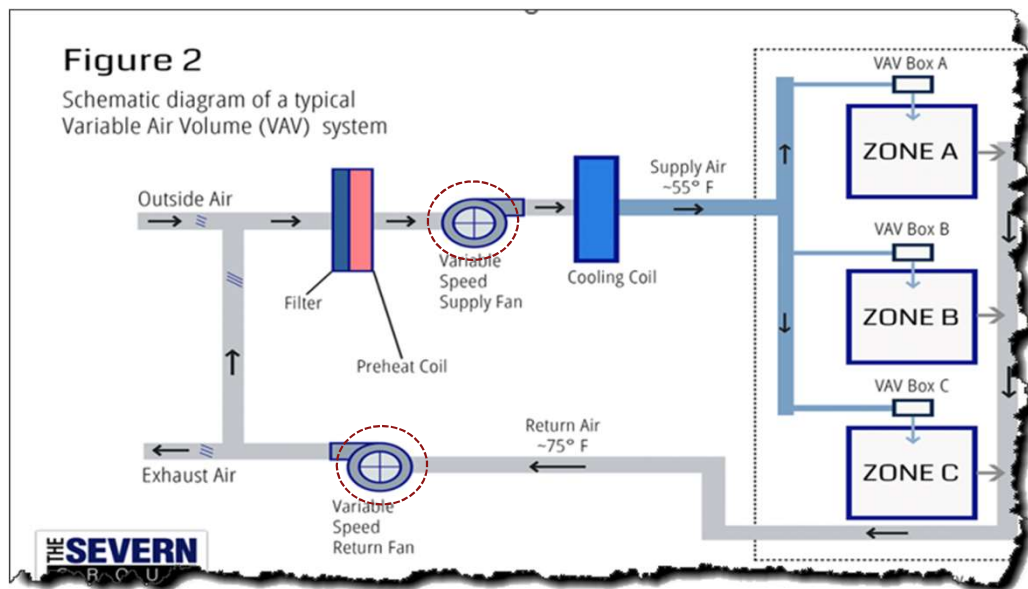
Challenge	Impact	Opportunity
high visibility field	Threshold is high to bring forward proposals and dedicate resourcing...higher than other initiatives	Define your organization's tolerance and create space for these proposals
diffuse focus and prioritization	A thousand flowers blooming. Sustainability touches all aspects of life, and everybody has a good idea	Based on your industry pick a focus...even at the expense of other good ideas
technical topics with lack of familiarity	Need to strike the balance between technical education and executive tolerance	Designate trusted "translators" who are subject matter experts
engagement & change management	Select initiatives ( <i>not all</i> ) require engagement from staff and community	Create engagement by spot-lighting 1-2 relatable initiatives from the list
resourcing & results	Initiatives are held to a higher standard and need proof of ROI	Track & demonstrate results over time to help build trust and data-backed decisions

Create the translation into each persons' "language"

How much knowledge is required to make the decision? Who is the technical translator? How to shift the conversation to empower a direction vs. an isolated decision process?

**Figure 2**

Schematic diagram of a typical Variable Air Volume (VAV) system




*Variable air volume (VAV) vs. constant air volume (CAV) in the design, construction, and management of a building. The decision point is during MEP (mechanical electrical plumbing) design and "standards"*

CAV – spaces that have little (no) variability in occupancy and utilization. Large (single?) zones and controlled through on/off switches

VAV – variable occupancy, variable requirements, humidity/temperature and zones. Optimizes the air flow and actual amount of air that needs to be heated and/or cooled.

VAV – additional upfront costs, reduced costs over the life of the building--total cost of ownership. VAV can reduce 30-40% of the natural gas in a hospital

 VAV (variable air volume)

# Context



*Los Angeles Palisades – January 2025*



# The impact is regional and local

The changing climate has direct, local impacts and also has regional and national impacts such as supply chain and regional economies.



*"Orange day" 1:00pm  
San Francisco - Sep 2020*



*Broadway Ave  
Redwood City - Dec 2022*



*Palisades & Eaton fires  
Los Angeles - Jan 2025*

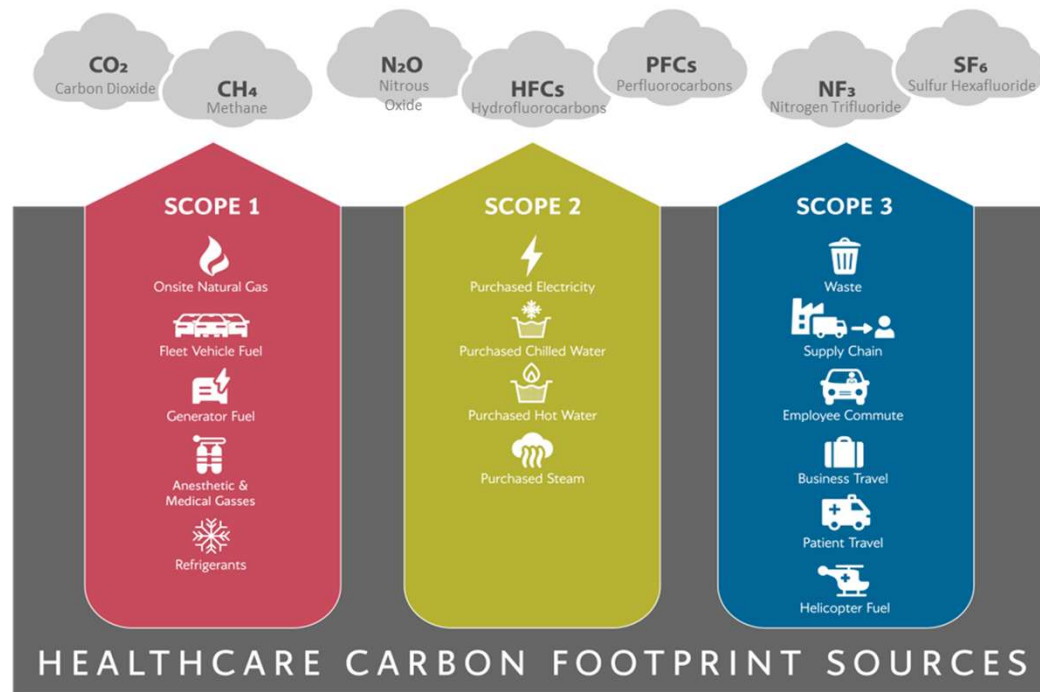


*Hurricane Helene – Baxter IV Fluid Plant  
Asheville, NC - Sep 2024*

- Air quality 201 (nml 20)
- 17% increase asthma hospitalizations
- Elevated levels of fine particulate matter (PM2.5)
- Stanford Medicine medical office building
- 4 floods in 10 years making the road impassible
- Sea level rise + storm runoff
- Palisades & Eaton burned for 24 days
- 16K structures, 37K acres
- 29 people killed
- Property damage estimated \$28-53 billion
- Years (decades?) to recover
- Baxter is the largest provider of IV fluids in the USA
- Another primary plant for Baxter is in Puerto Rico, and was severely impacted by Hurricane Maria 2017
- North Carolina mountain location is not where a typical hurricane would cause damage

# Why Address Emissions in Healthcare?

United States (U.S.) healthcare emits 8.5% of U.S. Greenhouse Gas (GHG) emissions and 25% of global healthcare emissions despite having only 5% of the world's population



US Healthcare emits

8.5%

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25%

of global healthcare emissions

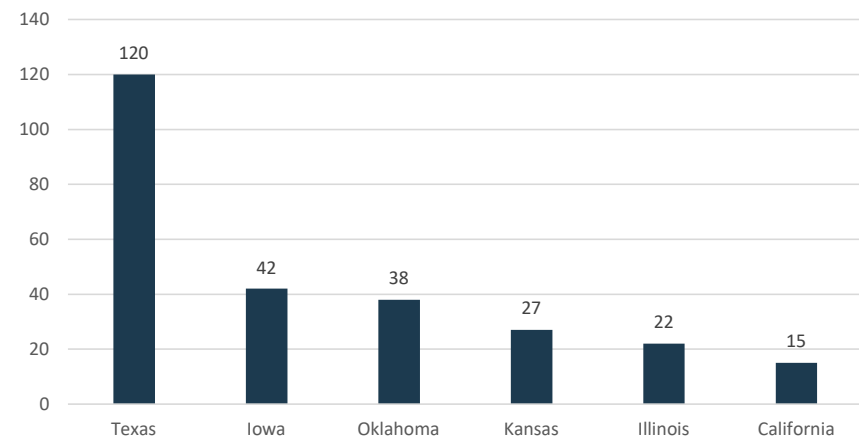
# Diversification of Energy Sources – it can be done

The common objective, no matter the power source, is to be more energy efficient. Hospitals are ~3 times more energy intensive than office buildings. Hospitals can become more energy efficient while maintaining patient safety.



Wind turbine farm

State Wind Energy Generation  
per Billion Kilowatt-hours



## Texas:

- ✓ 29% of energy in Texas is generated through wind power
- ✓ 120 Billion Kilowatt-hours = 11 million homes/year

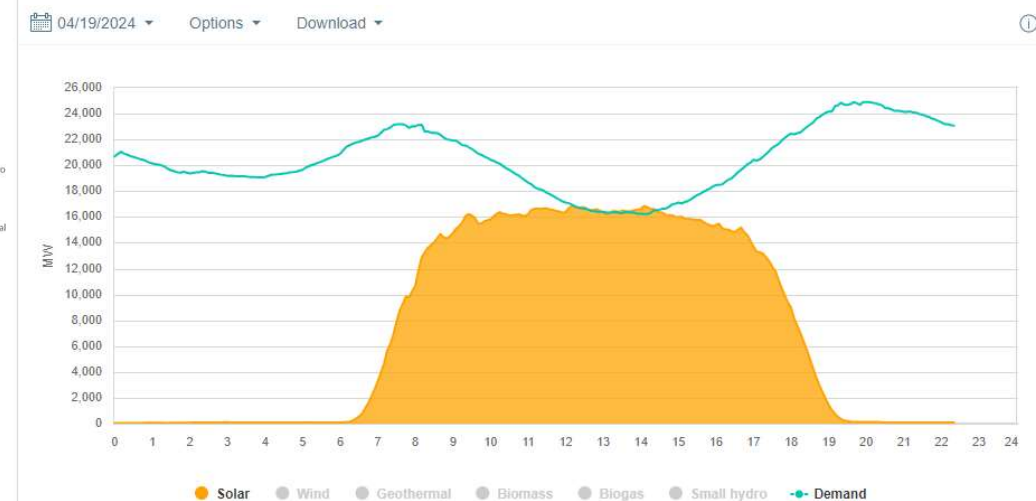
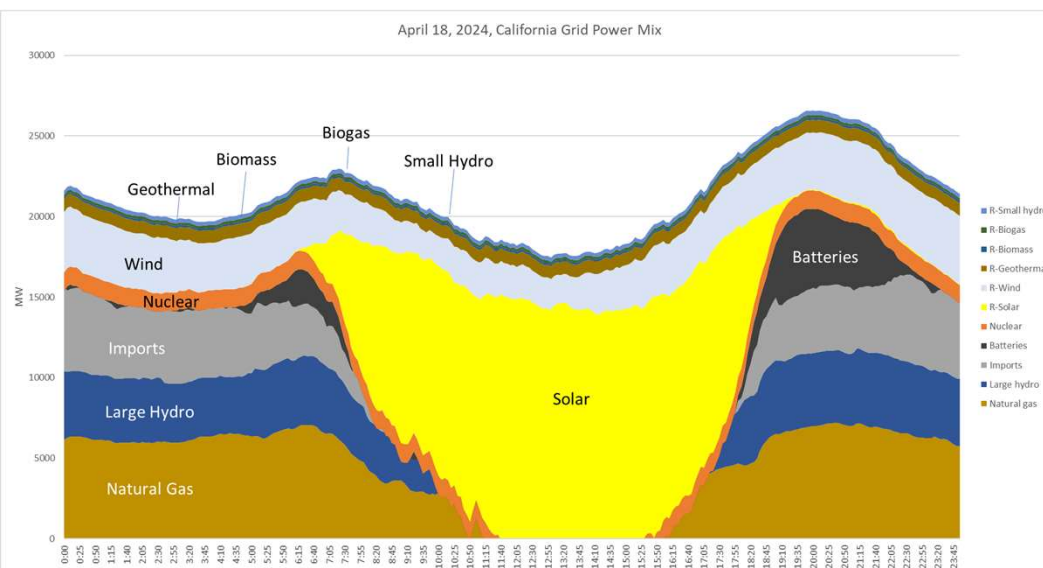
Source: U.S. Energy Information Administration (EIA)



# CA energy sources - April 19, 2024 - *a historic day*

Through regulation, incentives, and capital investment (private & public), California has the most advanced renewable energy sources of any densely populated and energy intensive region in the world

**April 19, 2024**, solar supply reached 101.23% of demand at 2:05 pm and exceeded 100% of demand for 15 minutes (new record)



On 34 of the 42 days in March and April California saw periods where renewable energy supply exceeded total electricity demand

## **Improving Human Health through Discovery and Care.**

Through innovative discovery and the translation of new knowledge, we improve human health locally and globally. We serve our community by providing outstanding and compassionate care. We inspire and prepare the future leaders of science and medicine.



**Environmental sustainability  
aligns with the mission, and  
accelerates progress towards it**

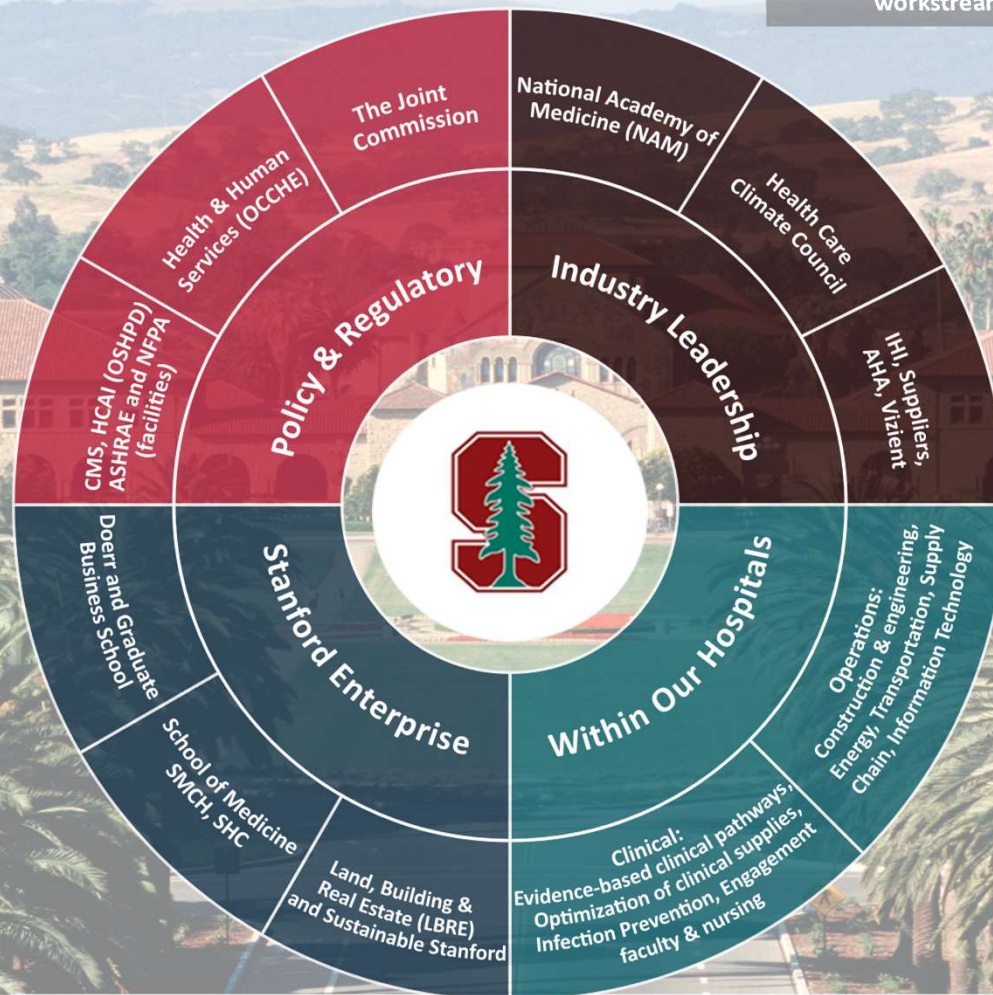
# Stanford Health Care Sustainability

Influence, Focus, and  
Performance





Stanford Health Care's sustainability efforts push along four workstreams from the national level to the local level



# Stanford Medicine Sustainability Commitments

Stanford Health Care has committed to sustainability from the Board Affirmation statement, to the annual goals, to the creation of the Environmental Citizenship Composite Score to track deliverables



## Stanford Medicine Board Commitment

"...committed to promoting the health and well-being of the people and communities Stanford Medicine serves while safeguarding the environment for future generations" (Nov 2022)

## Stanford Medicine Integrated Strategic Plan 2030

Support human and environmental health by harnessing our unique capabilities and reducing our environment impact (Nov 2023)

## Stanford Health Care FY25 Operational Plan

- Environmental Citizenship Composite score (ECCS).
- Improve Air Quality by increasing number of staff that use sustainable commute by 12.0%

## Metric

Environmental Citizenship (composite score)

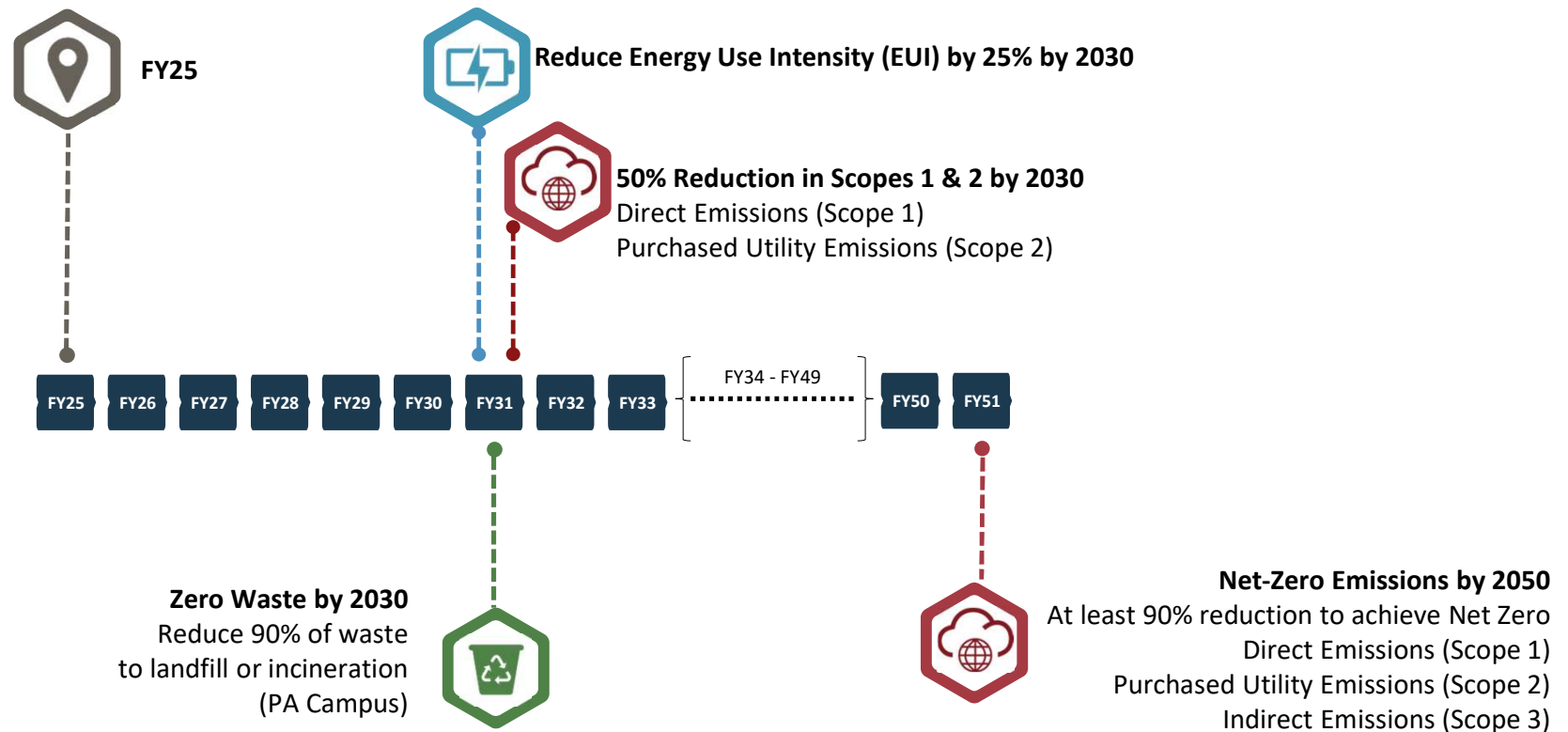
Research	Education	Value Equation	Reputation and Reach	Diversity	Financial
Research funding NIH rankings Clinical trials Awards Publications Intellectual property	Admission and matriculation rates Education outcomes	Quality/outcomes Cost of care Experience/service/access Telehealth & virtual care Wellness Environmental citizenship	External rankings Thought leadership	Faculty Learners Staff	Operating margin EBIDA margin Fundraising activity



Moving Biomedicine Forward

# Stanford Health Care Sustainability Goals Over Time

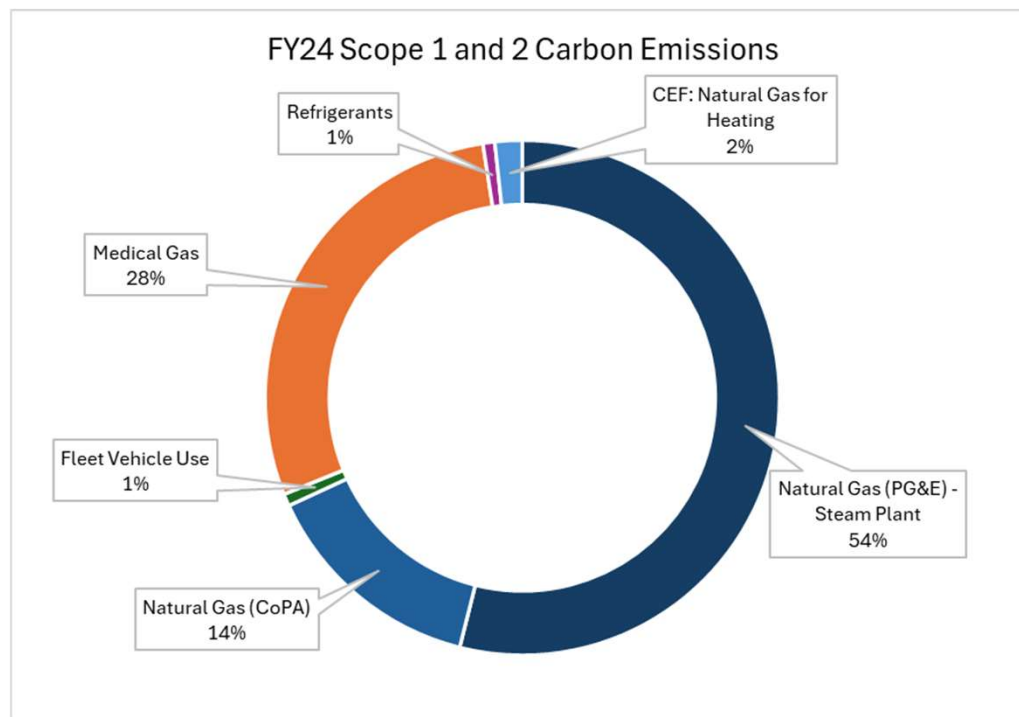
SHC has committed to goals to reduce energy use, emissions, and waste generation through 2030 & 2050.





# FY24 Greenhouse Gas Emissions- Palo Alto Campus

Natural gas, utilized in hospitals for steam generation (high temperature hot water), is a primary contributor as are medical gases (anesthetic gases)



## GHG Emissions

**Scope 1 :** 19,148 MTCO<sub>2</sub>e

**Scope 2 :** 333 MTCO<sub>2</sub>e

This is the same as 2,616 homes energy use for one year, or 4,544 gasoline cars driven for a year!

## Waste Stream

In FY24, Stanford Health Care disposed of over 5,900 tons of medical, hazardous, PHI, and Landfill waste – that's almost 6,000 cars!

SHC Palo Alto Campus generates about

**5,920**

Tons of waste per year and of that,

**3,400**

Tons end up in landfill

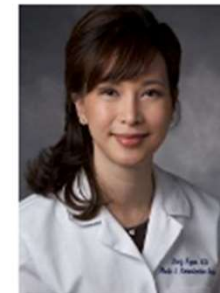


*'95 Honda hatchback, weigh  
just over 1 ton.*





# Framework and Initiatives



Stanford Medicine Pilot Surgeons

# SHC Sustainability Pillars

The five pillars serve as the baseline for all the SHC sustainability activities. The primary focus for the work groups has been GHG, energy, and waste



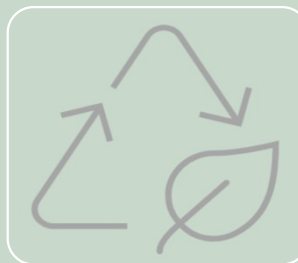
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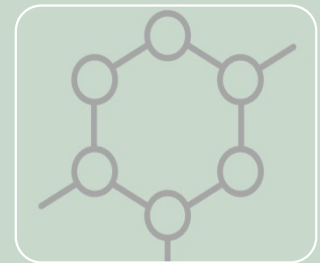
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## Water Conservation

- Reducing the water use intensity of care delivery

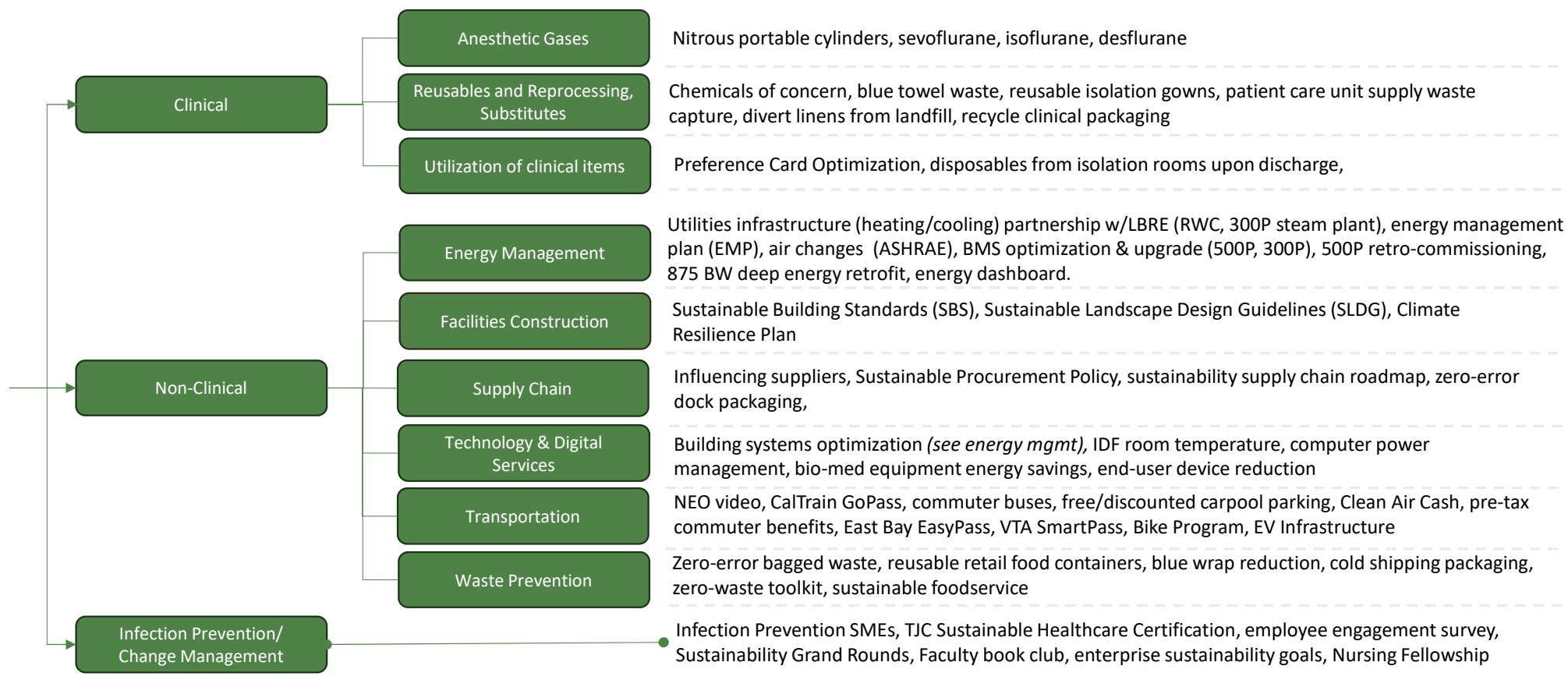


## Chemicals of Concern

- Reducing the presence of chemicals of concern in the healthcare environment

# Initiative Focus - 9+1 (*change mgmt and IPC*)

The initiatives have significant points of intersection but are arranged in groupings to align with subject matter expertise



## Slide 24

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**JN1**

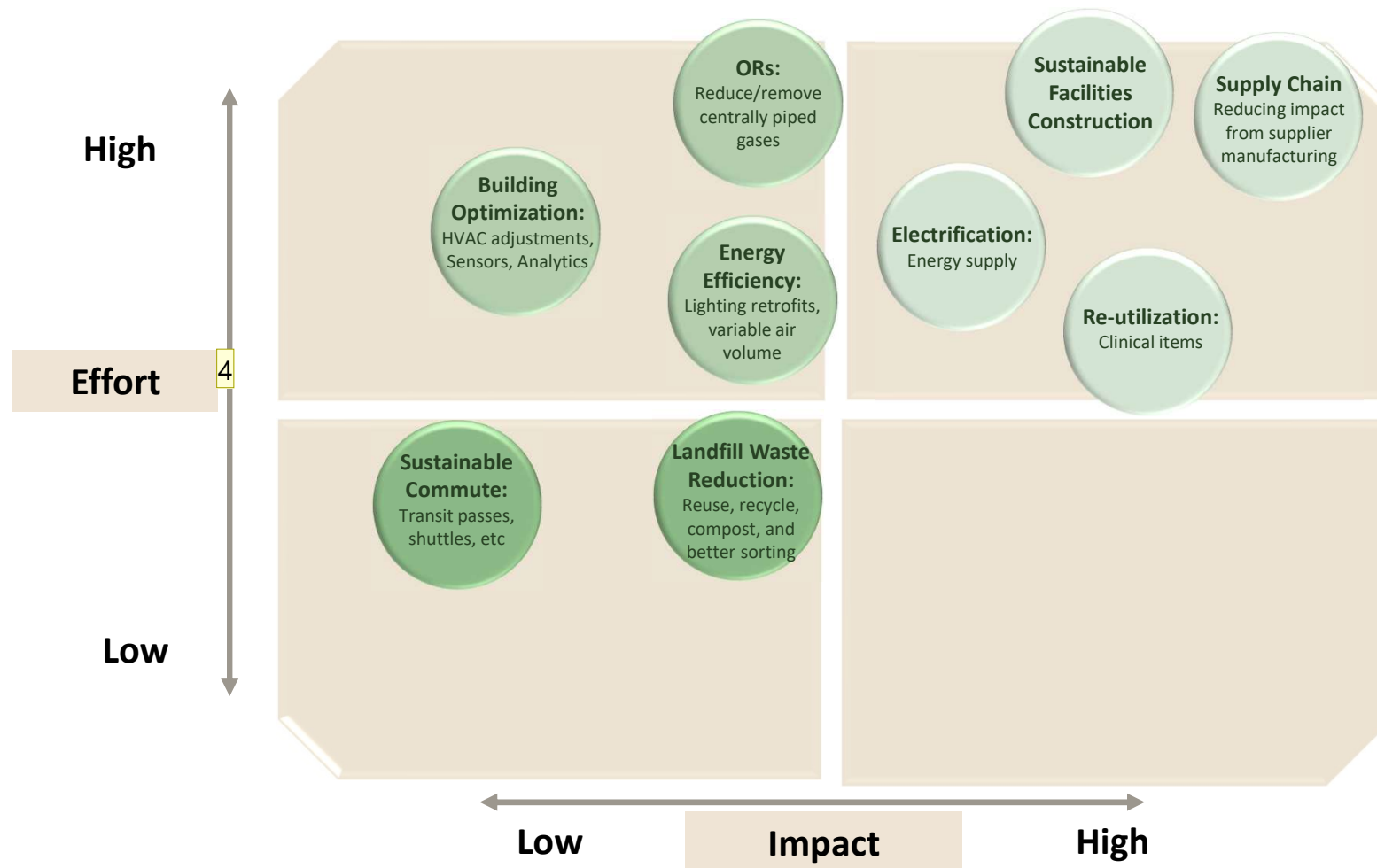
All brown removed per todays working session.

Nielsen, Jill, 2025-03-18T01:02:50.819



# Initiative Selection

A baseline selection framework is effort/impact. With that said, there might be a reason to select an initiative that highly resonates with your team, customers, or executive team.



- 1** Central utility plant  
Fries, Molly, 2025-03-12T00:54:52.486
- 1 0** (Workshop language - energy plant)  
Fries, Molly, 2025-03-12T00:55:07.661
- 2** Molly focus on visuals  
Fries, Molly, 2025-03-17T18:02:23.287
- 3** TDM, waste prevention, etc need to be more plain language  
Fries, Molly, 2025-03-17T21:51:57.165
- 4** Asking to change their manufacturing process  
Fries, Molly, 2025-03-17T21:52:22.419
- 5** Bubbles all the same size. Only effort & impact. Examples more explicit  
Fries, Molly, 2025-03-17T21:54:42.058
- 6** Cells smaller, switch back to left & bottom axes  
Fries, Molly, 2025-03-27T22:38:46.728

# The Process

Applying principles of ROI  
and Future-Proofing



Inside the Central Energy Facility where it uses heat recovery technology and is more efficient than traditional heating and cooling systems.

# Integrated Strategic Plan (ISP) 2030

The ISP is the multi-year “north star” for Stanford Medicine that encompasses research, teaching and clinical care across the enterprise.



## Our Mission

### Improving Human Health through Discovery and Care.

Through innovative discovery and the translation of new knowledge, we improve human health locally and globally. We serve our community by providing outstanding and compassionate care. We inspire and prepare the future leaders of science and medicine.

## Our Vision

### Precision Health: Predict. Prevent. Cure. Precisely.

Heal humanity through science and compassion by leading the biomedical revolution in Precision Health.

## Our Values

Excellence and Service  
Leadership and Integrity  
Innovation and Impact  
Diversity, Inclusion, and Health Equity  
Collaboration and Partnership

Human Centered & Discovery Led						
PILLARS	Value Focused		Digitally Driven		Uniquely Stanford	
PRIORITIES	<p>Extend Stanford Medicine's tripartite mission locally and globally through <b>measured growth as an integrated academic medical system.</b></p> <p><b>Manage current and future patient demand</b> by embracing novel solutions and leveraging new and existing partnerships.</p> <p><b>Develop sustainable funding models to support research and discovery</b> through partnerships and philanthropy.</p>		<p><b>Reimagine patient-centered care</b> by developing digital solutions that improve quality, access, equity, and cost.</p> <p><b>Enhance data collection, sharing, literacy, and use</b> by establishing consistent practices and frameworks to ensure informed, consistent, and transparent management of data across the enterprise.</p> <p><b>Lead the responsible development and use of transformational breakthroughs</b>, such as artificial intelligence, to accelerate discovery, drive personalized care, and empower the next generation of leaders.</p>		<p><b>Address humanity's most complex challenges in pursuing knowledge as an end itself.</b> Continue to pioneer scientific discovery and train biomedical leaders of the future.</p> <p><b>Foster paradigm-shifting research</b> by cultivating individual excellence and cross-discipline collaboration across Stanford University, and <b>reinvigorating core facilities.</b></p> <p><b>Ensure preeminence</b> across all our mission areas to deliver on the promise of “<b>discovered here, used everywhere.</b>”</p>	
ENABLERS	<p><b>Support human and environmental health</b> by harnessing our unique capabilities and reducing our environmental impact.</p> <p><b>Promote physical, mental, financial, and emotional well-being and resilience:</b> Foster a positive and supportive atmosphere so that all can reach their full potential.</p>		<p><b>Advance our core technology infrastructure:</b> Enable collaboration, expand our reach, and amplify our impact.</p> <p><b>Train the future workforce:</b> Implement robust training resources in technology and digital transformation for members of the Stanford Medicine community and beyond.</p>		<p><b>Bolster organizational alignment:</b> Strengthen coordination and aligned decision-making across Stanford Medicine to maximize impact within and across our mission areas.</p> <p><b>Deepen relationships across Stanford Medicine and with those we serve:</b> Practice inclusive excellence, create opportunities to engage, inspire, and empower.</p>	
METRICS	<p><b>Research</b></p> <ul style="list-style-type: none"> <li>Research funding</li> <li>NIH rankings</li> <li>Clinical trials</li> <li>Awards</li> <li>Publications</li> <li>Intellectual property</li> </ul>	<p><b>Education</b></p> <ul style="list-style-type: none"> <li>Admission and matriculation rates</li> <li>Education outcomes</li> </ul>	<p><b>Value Equation</b></p> <ul style="list-style-type: none"> <li>Quality/outcomes</li> <li>Cost of care</li> <li>Experience/service/access</li> <li>Telehealth &amp; virtual care</li> <li>Wellness</li> <li>Retention</li> <li>Environmental citizenship</li> </ul>	<p><b>Reputation and Reach</b></p> <ul style="list-style-type: none"> <li>External rankings</li> <li>Thought leadership</li> </ul>	<p><b>Diversity</b></p> <ul style="list-style-type: none"> <li>Faculty</li> <li>Learners</li> <li>Staff</li> </ul>	<p><b>Financial</b></p> <ul style="list-style-type: none"> <li>Operating margin</li> <li>EBIDA margin</li> <li>Fundraising activity</li> </ul>

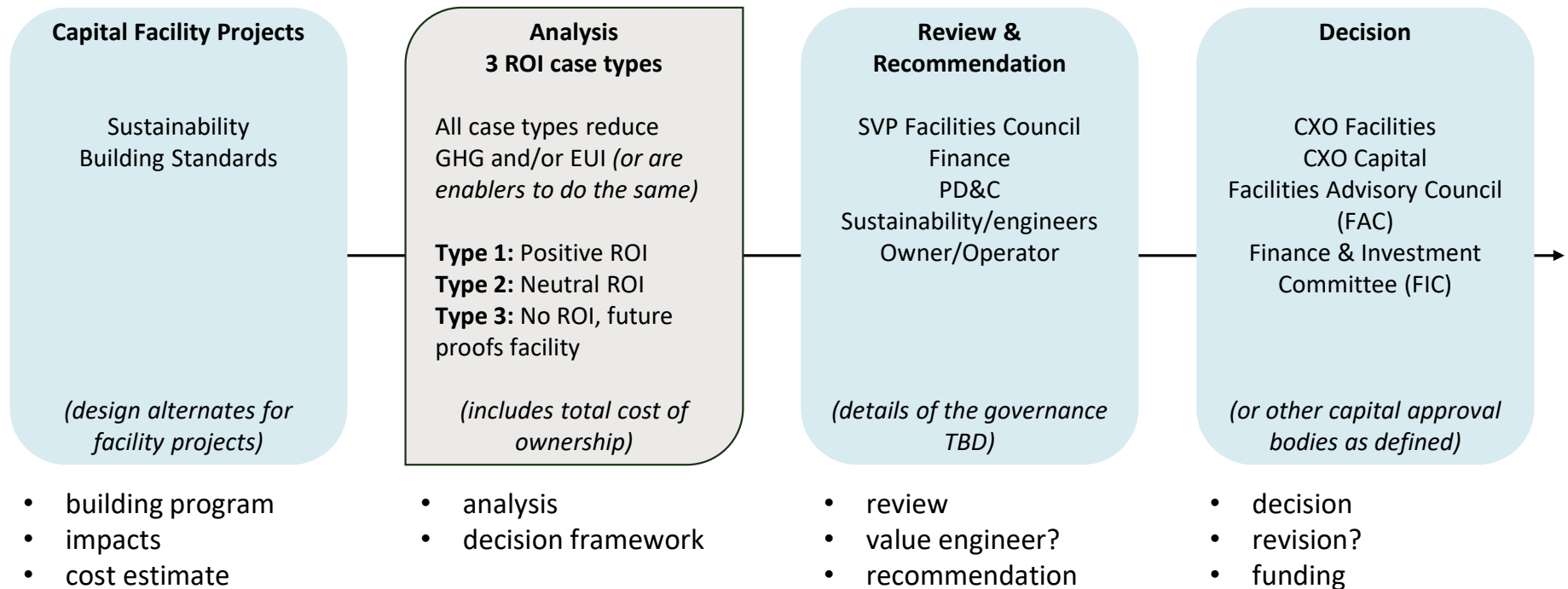


Moving Biomedicine Forward



# Decision Framework and Governance

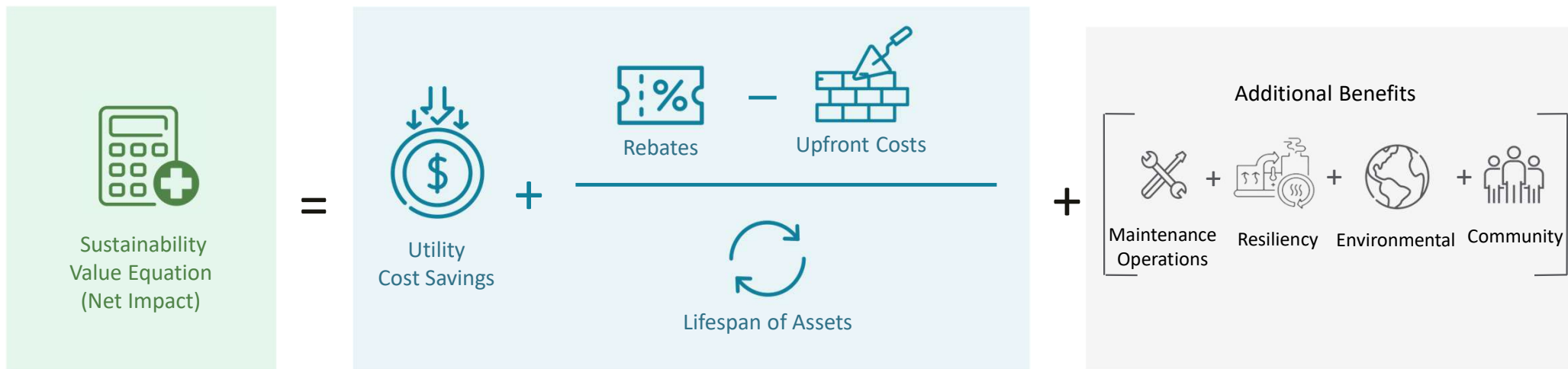
By applying an agreed-upon decision framework, the governance process determines the final scope.



# Sustainability Value Equation

The Sustainability Value Equation is a means to metricize projects coming forward for approval. The majority are “hard benefits” with some “soft benefits”.

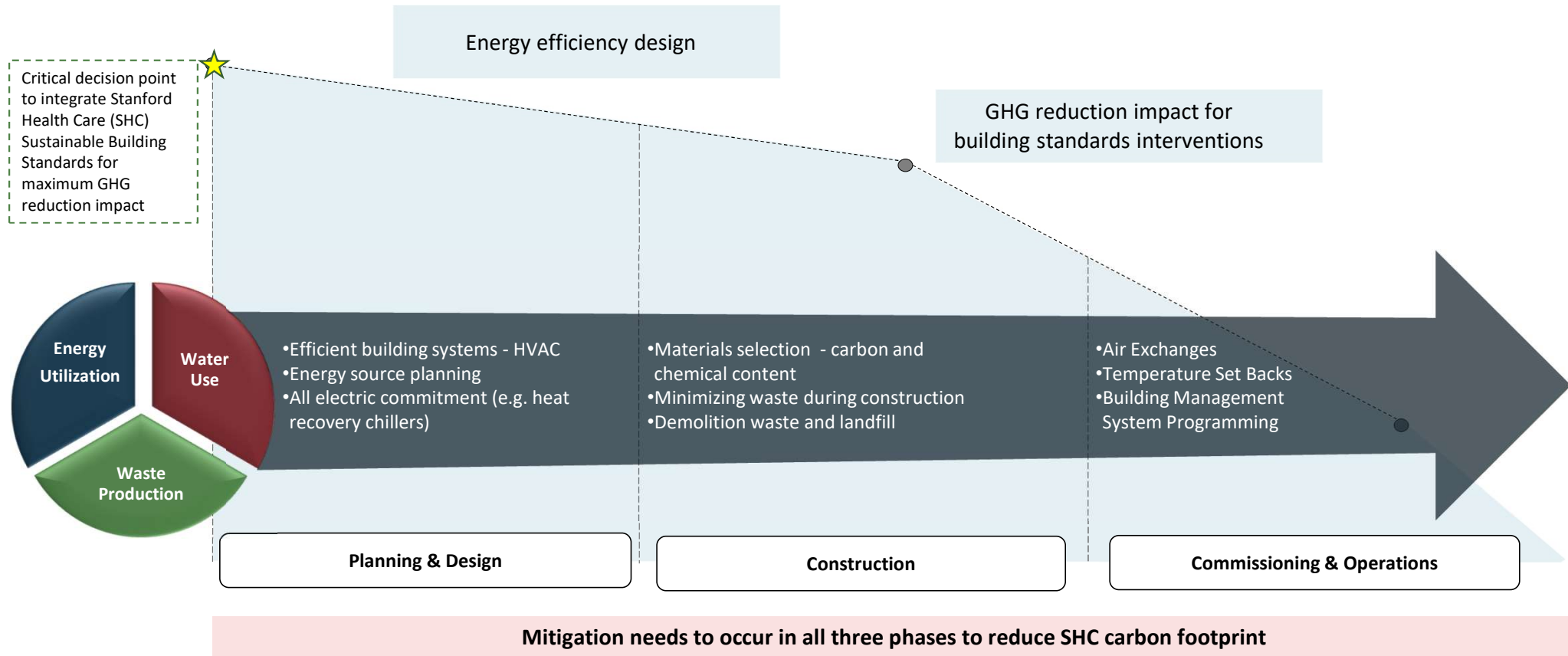
## The Stanford Medicine Sustainability Value Equation



The Stanford Medicine Sustainability Value Equation is proprietary to Stanford Medicine and may not be distributed or reproduced without written permission. © 2024 Stanford Medicine.

# Area of Opportunity in New Construction

The opportunity to reduce greenhouse gas (GHG) emissions dramatically decreases if not addressed during the Planning & Design phase



# Future Ready Infrastructure

Advancing Electrification, Energy Efficiency in Design, Decarbonization, and Strategic Campus Planning to Optimize Facilities for the Future. 300P SPD is setting precedence



## 300 Pasteur SPD Electrification

Install all-electric SPD Technologies, right-sized for future SPD loads and reducing electricity loads. Strategically prepares for decarbonization and Natural Gas Steam Plant Decommissioning.



## Tri-Valley Design Alternate

Feasibility study of electric ready technologies. Evaluating electric ready design options to identify opportunities for Lifecycle Cost Savings for this and potentially future projects.



## RWC Clinical Lab and Stanford Blood Center

Evaluating all-electric stand-alone design and comparing to potential future costs for retrofit and gas-based options. Focus on "no-regrets" electric ready measures.



## RWC Campus Planning

Investigating electrical infrastructure limitations, including current utility provided circuits. Proposing equipment designs that will allow for future electrification.



## Cancer Campus

Conceptual design focusing on identifying electric ready infrastructure needs, accounting for shift in costs and identifying potential increase in costs.



# Medical centers commitment to move to all-electric

UC Regents has committed, for all new construction, to move off natural gas and go to all-electric, and to migrate existing buildings to the same over the future years.



- The nation's first all-electric, carbon-neutral medical center, UCI Health — Irvine
- State-of-the art all-electric central utility plant applying heat recovery technology
- A seven-story, 350,000-square-foot, acute care hospital with 144 inpatient beds, 10 operating suites and a 24-hour emergency department with 20 treatment rooms — opening 2025
- UCSF committed to all new construction going forward to be "all-electric"
- New 15-story Parnassus Hospital with a 682-bed capacity coming online in 2030 will utilize principles of heat recovery
- The 14 story California Tower Project (Hospital) will use electric CUP for chilled water and hot water by the time it opens in 2030
- UC Davis Health has developed a strategy to align with ongoing campus expansion and the goal to achieve all electric sustainability targets by 2040
- The existing Central Plant will be converted to All-Electric operating Central Plant
- Sacramento - A 310-bed hospital, energy center, and support parking is under construction in Sacramento. A new, onsite energy center will provide support for the facilities
- San Jose - The new all-electric hospital under construction in San Jose will have twice the patient capacity as the current hospital, with a capacity of 303 beds

# Energy Management Plan (EMP)

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*Central Energy Facility (CEF) is powered by 100% renewable energy with three 2,500-ton heat recovery chillers, two 5-million-gallon chilled water storage tanks and one 2-million-gallon hot water storage tank.*

# Energy Management Plan (EMP)

EMP is a comprehensive assessment to inventory current energy and emissions status, provide a list of actions for improvements, set performance goals, and outline a monitoring process



## Current State

Inventories energy usage and GHG emissions current state

## Goals

Sets performance goals

## Actions

Provides a list of energy conservation measures to achieve EUI & GHG reduction targets

## Monitor

Governance & monitoring structures to sustain the gains

# Energy Management is central to the large-scale sustainability initiatives

SHC's energy management future is a combination of leveraging the innovation of the university designed Central Energy Facility (CEF) and implementing projects from the EMP and the Design Alternates

## Alignment with Stanford University Central Energy Facility

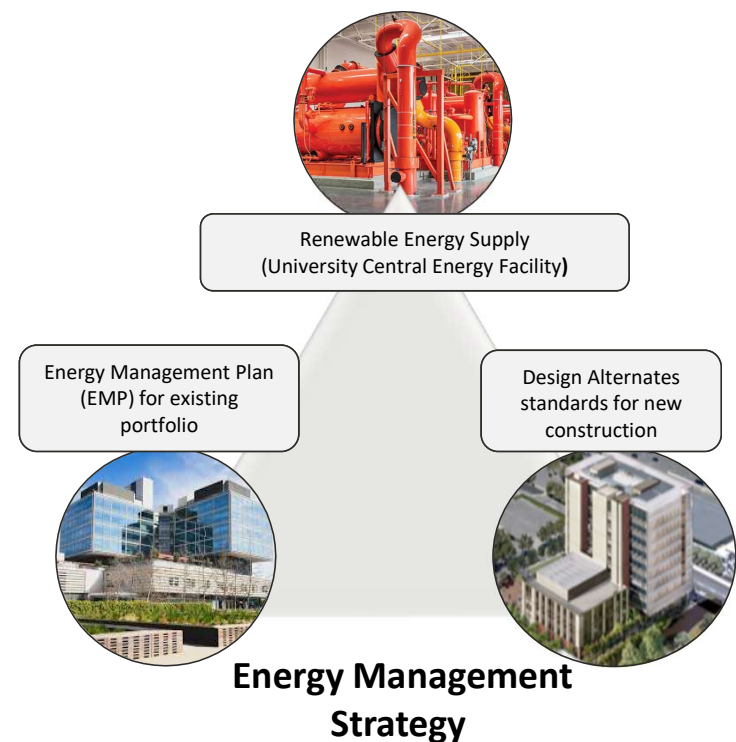
Stanford University Board of Trustees 2011 investment in the innovative Central Energy Facility (CEF) enables Stanford Health Care to move off natural gas to renewably powered electricity-based system to reduce cost and greenhouse gas short and long term.

## Energy Management Plan for Existing Buildings

A comprehensive plan focused on energy efficiency in existing buildings. Energy Conservation Measures (ECMs) focused on Building Management System (BMS) optimization are applied.

## Design Alternates for New Construction

Majority of the "value" from Design Alternates come from energy program design, along with water conservation, construction waste management, and selection of products without toxins.

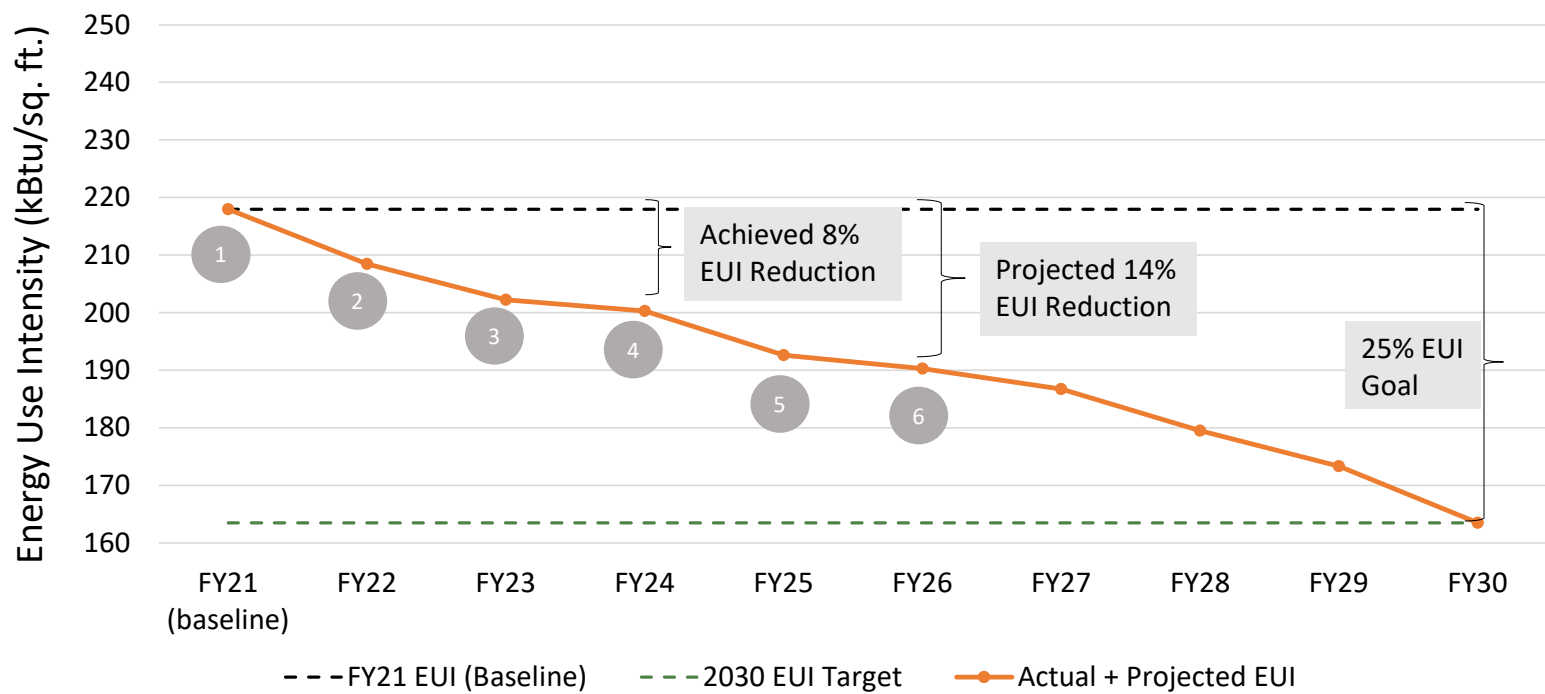




EUI Actual and Projections

SHC has reduced its energy use by 8%. With ongoing project implementation, SHC is expected to reduce energy use by 14% by end of FY26 and by 25% by the end of 2030

Energy Use Intensity (EUI) Achievements and Projections Through FY30



- Completed projects:**
- 1 500P Retro commissioning
  - 2 Garages LED upgrade
  - 3 875 BW Controls Upgrade
- Projects in progress:**
- 4 LED upgrades
  - 5 BMS Optimizations
  - 6 Controls upgrades

10 Year Roadmap

# Central Energy Facility (CEF) – Components University

The CEF is a highly designed plant with several components that fully integrate to create a hyper-efficient utility technology



The LBRE/CEF is not just the value of moving to electric--electric that can be powered through renewables-- but the program designed by LBRE is “hyper-efficient” utilizing:

- ✓ Leveraging the use of “low temperature” hot water (120F) and not over-producing high temperature hot water (250F). Providing targeted high temperature hot water for the systems that require that temperature
- ✓ Heat recovery chillers that capture the dissipated heat and reuse the energy. The first-time HRC of this scale were built by York.
- ✓ Closed loop piped systems for the recirculation of both hot and cold water
- ✓ Thermal storage (hot & cold) that replenish during off-hours when electricity demand is less expensive

<https://www.york.com/commercial-equipment/chilled-water-systems/water-cooled-chillers>

# Initiatives in the Operating Room



*A view into an OR room where biomed equipment and air changes are opportunities for energy savings.*

# Impact of Interventional Platform (IP) on Sustainability

There is significant opportunity in integrating sustainability in the IP to reduce its impact on the environment, while maintaining high quality patient care



Operating Rooms use as much as **6 times as much energy** as the rest of the hospital



Operating Rooms account for **28% of waste generated** in SHC



Operating Rooms are responsible for up to **60% of a hospital's supply costs**

*Opportunity to drive sustainability,  
while maintaining high quality patient care*

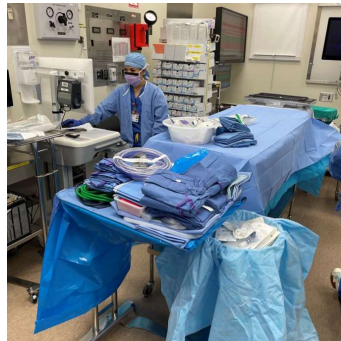


# Sustainability Programs in Action in the Clinical Setting

Below are examples of key projects underway in-the-field. The projects involve clinicians, engineers, infection prevention specialists, IT, supply chain, and more



Nitrous Oxide  
cylinders vs. piped  
(greenhouse gases)



Preference  
Card Optimization  
(single-use plastic  
waste)



Bio-med Equipment  
24/7 settings  
(energy)



Operating Room  
24/7 room settings  
(energy)



Room Air  
Exchange Rates  
(energy)

# Key Strategies for IP-Sustainability Integration

Successful integration of sustainability into the IP require a combination of mitigation, education, collaboration, and innovation strategies

## Mitigation

Allocate and implement resources to help OR staff reduce carbon footprint

Preferential use of effective treatment, medical technologies, and supplies with lower carbon footprint

Optimize processes and standard work to reduce waste, energy, etc.

## Education

Educate OR staff on environmental impact of surgical care

Create a culture of sustainability by celebrating staff contributions and success stories

## Collaboration

Partner with other SHC depts and align on sustainability objectives and projects

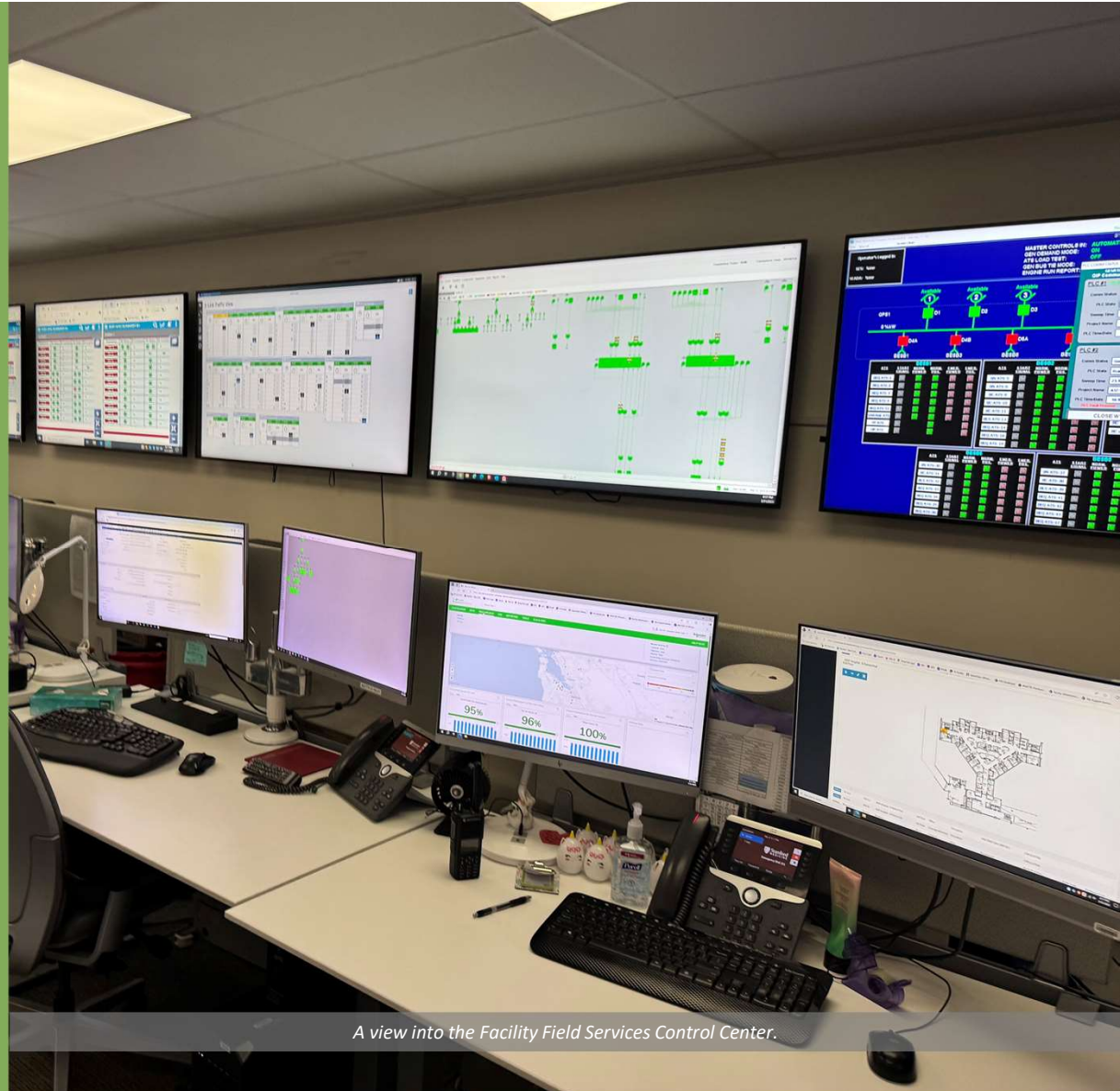
Collaborate with industry to make surgical supplies in an environmentally conscious manner

## Innovation

Use data analytics to identify areas for improvement and innovation and track sustainability progress

Leverage technology that advance sustainability

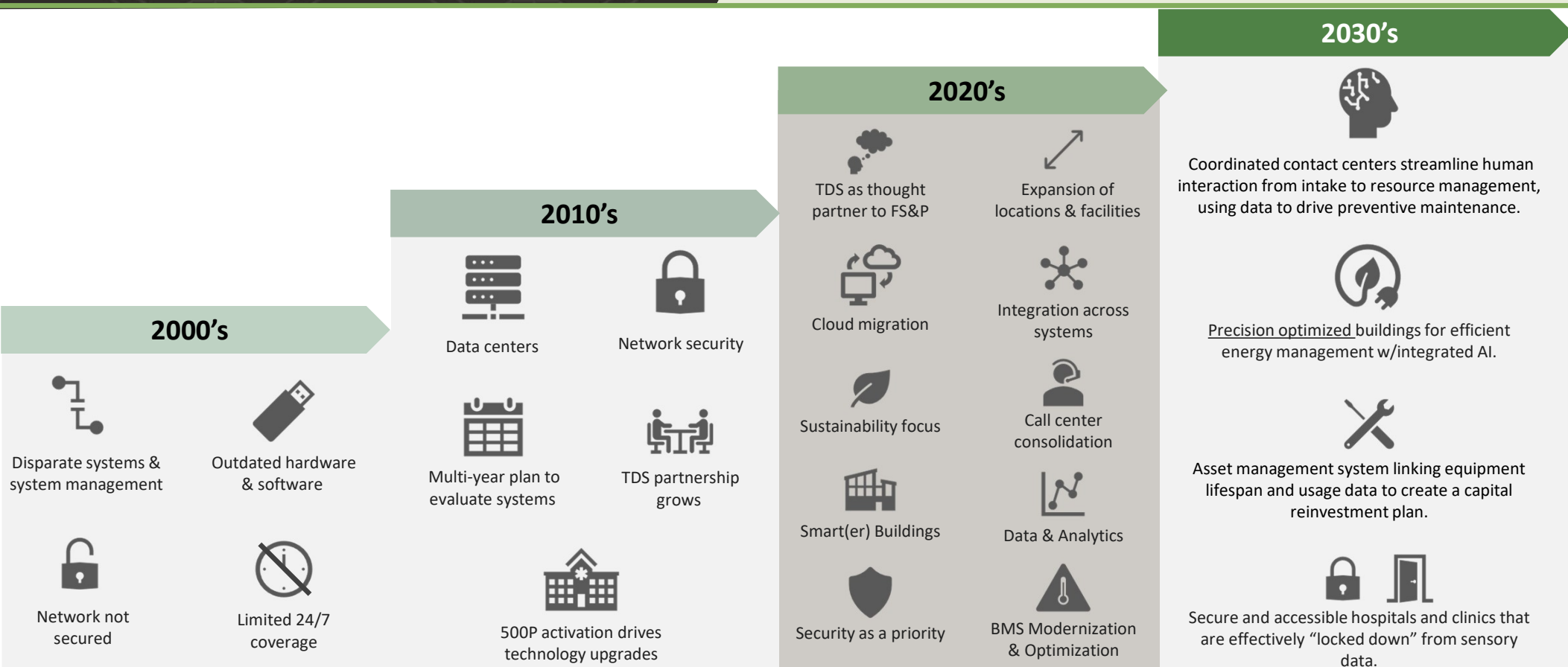
# Technology



A view into the Facility Field Services Control Center.

# Technology for sustainability in facilities - mechatronics

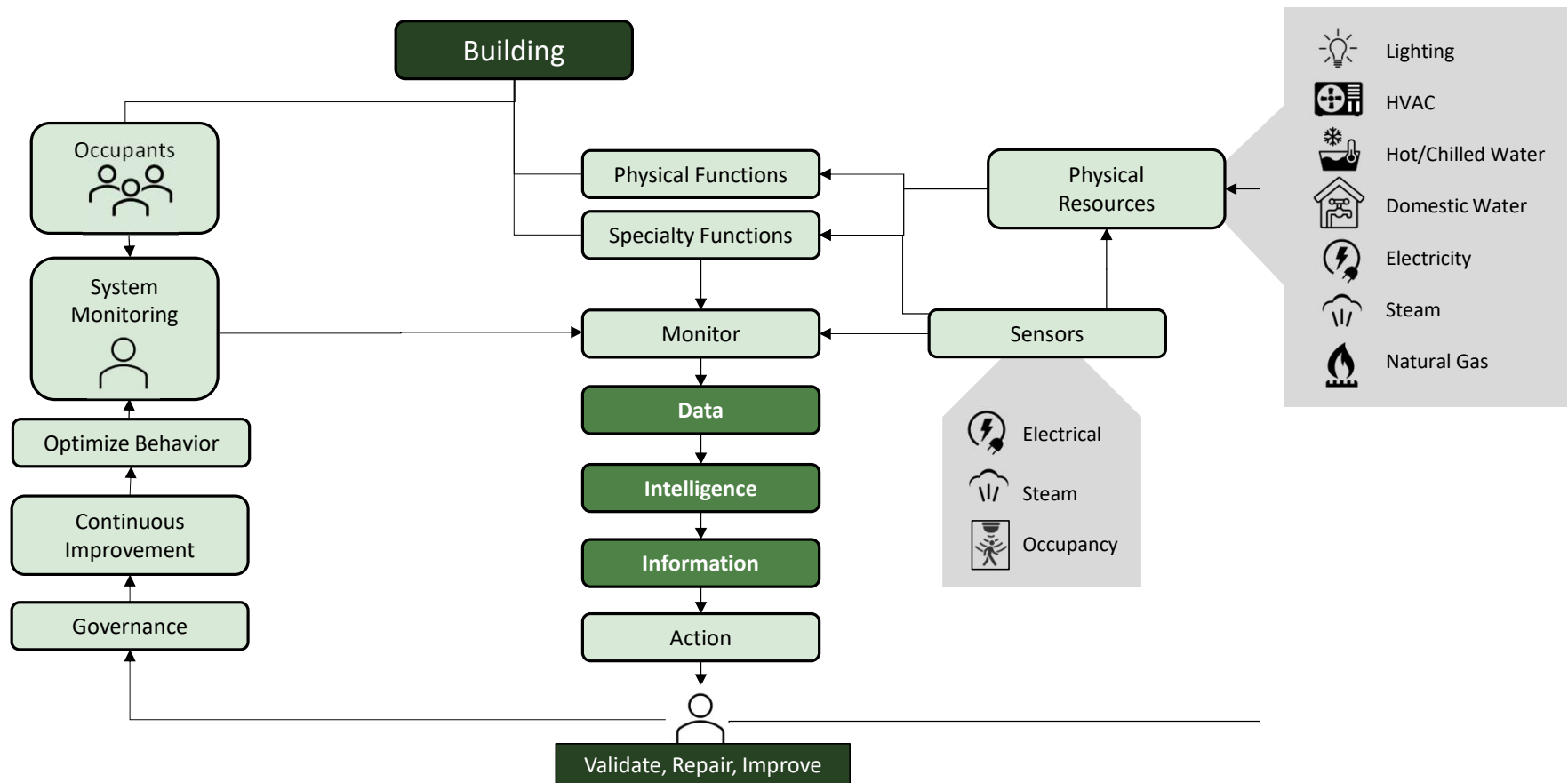
Operations technology has long lagged behind clinical technology. The integration of “mechatronics” with software is catapulting this forward for truly “smart(er) buildings”





# “Smart” Building Ecosystem

An interconnected system driven by data intelligence will inform opportunities for utility system adjustments and behavior changes to reduce energy consumption



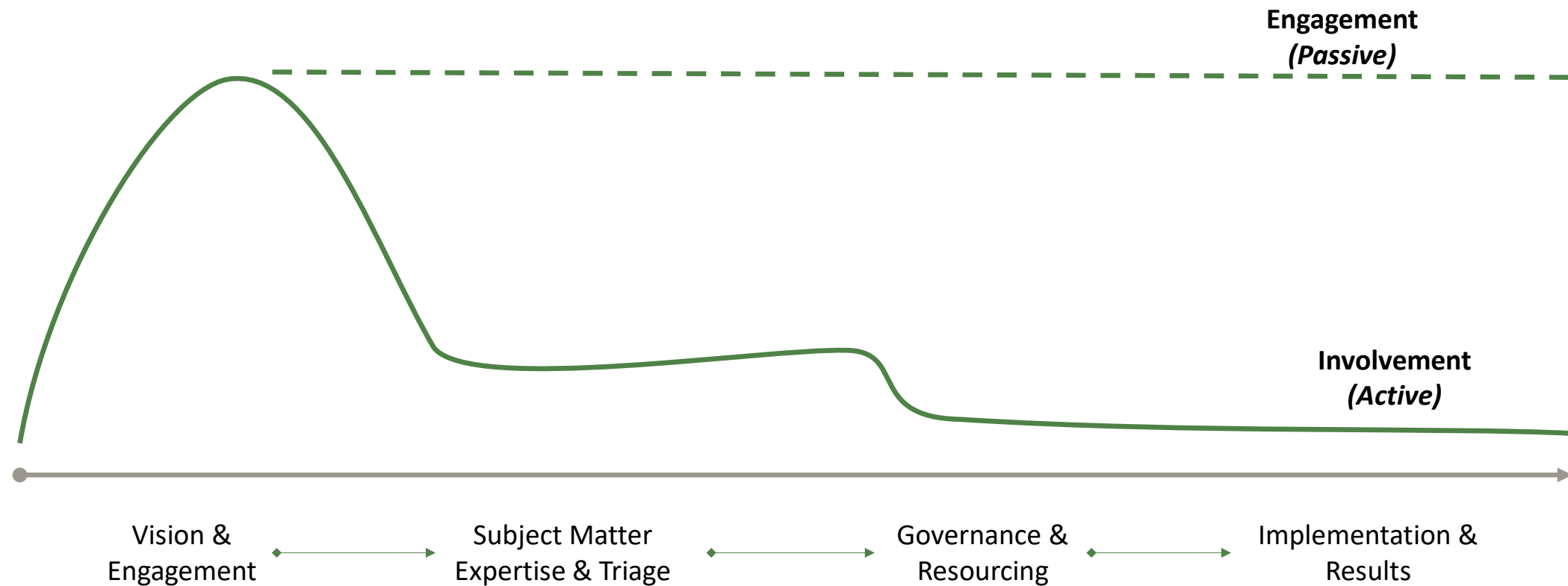
# People & Engagement



*The Medical Directors and Engineers that worked on the decommissioning of nitrous oxide at 300P.*

# Engagement & resourcing

As initiatives peak and ideate, different numbers of people from different perspectives should be engaged – while a larger group is engaged for visioning & engagement, fewer are needed to be actively involved with implementation



## Closing Remarks

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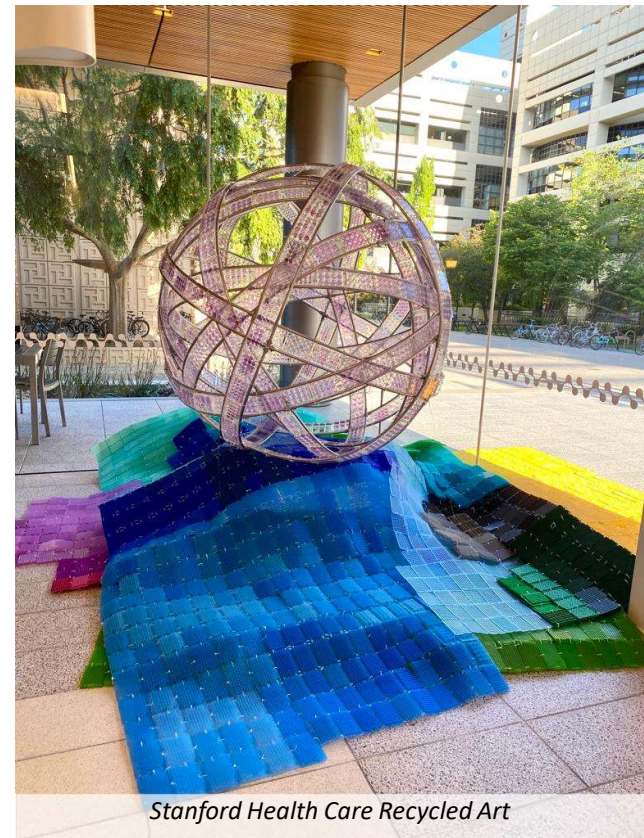


A new Air Chiller and Air Handling Unit (AHU) was installed to replace out dated equipment and improve energy efficiency.



## *Making an impact without making a statement*

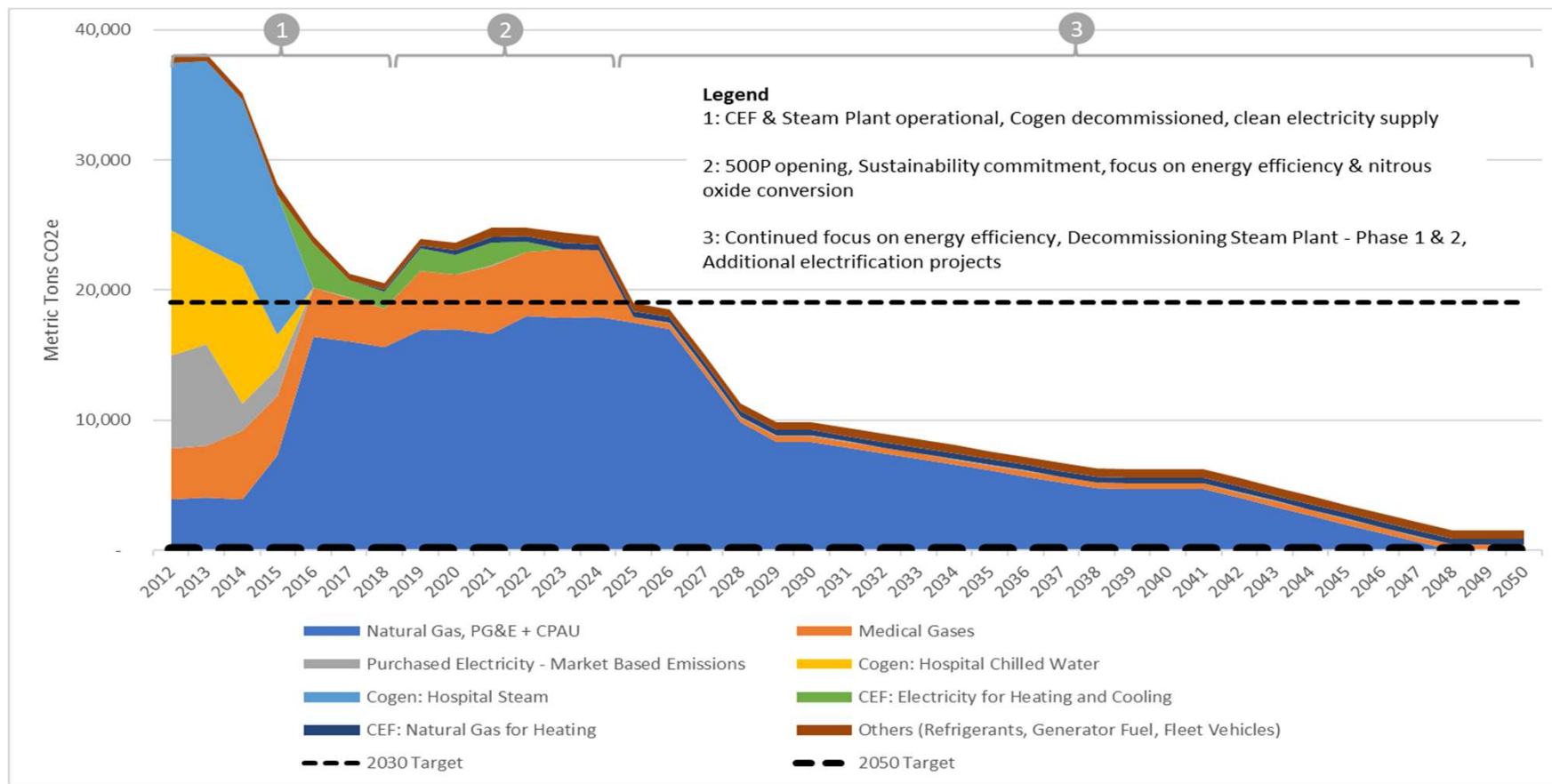
- ✓ Early identification of the inflection points
- ✓ Knowing the difference between a cumulation of the small things and/or a few big transformative ideas
- ✓ Personal choices and professional decisions



Front End

# Progress towards emissions goals

SHC already has a 2030 and 2050 goal. New emissions from new construction cannot be added if we want to meet our carbon targets, so operationalization of sustainability features are crucial for all new construction 2025 onward



# People

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## Vision & Engagement

## Subject Matter Expertise & Ideas

## Resourcing Governance

## Implementation & Results





# People

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## Vision & Engagement

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## Implementation & Results



# Pilot Surgeons

The recruitment of influencers from across the organization is key – from the frontline team, to the clinical faculty, to the leaders that control the resources



# People

People in different roles across the organization must be engaged to fully champion efforts

