

**Launch Presentation**

FEBRUARY 29, 2024

**NEW YORK**  
**HEALTHCARE**  
**DECARBONIZATION**  
**GUIDE** STRATEGIES FOR RESILIENT BUILDING  
& FACILITY CARBON REDUCTION

# WELCOME & INTRODUCTION



Joe Berman  
Senior Advisor – Strategic  
Partnerships, LEED AP BD&C  
**NYSERDA**

# TODAY'S SPEAKERS



Joe Berman  
Senior Advisor – Strategic  
Partnerships, LEED AP  
BD&C  
**NYSERDA**



Artorius M. Reyes  
Director of Business Development  
**Trane**  
Past-President  
**ASHRAE New York City Chapter**



Michael C. Taylor  
CEO  
**SchellingPoint**

# ACKNOWLEDGEMENTS

A public/private partnership consisting of State and Local Agencies and Authorities including, but not limited to:

- New York State Energy Research & Development Authority (NYSERDA)
- New York State Department of State (DOS)
- Department of Environmental Conservation (DEC)
- Department of Health (DOH)
- New York City Mayors Office
- New York City Department of Buildings (DOB)
- Utilities

*Industry leaders such as:*

- Hospital Association of New York State (HANYYS)
- Greater New York Hospital Association (GNYHA)
- Steering Committee & Core Team Members – The New York Healthcare Protocol
- Other Healthcare affiliates and partners that have a vested interest in decarbonization, New York City Local Law-97 compliance, and achievement of a timely and cost-effective path to achieving the necessary building emissions targets.

# COLLABORATION



**FOUNDER'S CIRCLE**

**ASHRAE LEADERSHIP CIRCLE**

**HEALTHCARE SECTOR LEADER**

ASHRAE New York City Chapter

ASHRAE

NEW YORK STATE

NYSERDA

AKF

TRANE

ASHRAE Twin Tiers Chapter

ASHRAE Rochester Chapter

ASHRAE Bi-State Chapter

ASHRAE Buffalo Chapter

ASHRAE Central New York Chapter

ASHRAE Northeast Chapter

CHA

INDUSTRY SUPPORTER

OLA CONSULTING ENGINEERS

**CONTRIBUTORS**

- Architecture & Design Firms
- Consulting Firms
- Engineering Firms
- Government Organizations
- Hospitals
- Legal
- Manufacturers
- Professional Associations
- Schools & Universities
- Utility Companies

# LEARNING OBJECTIVES

Upon completion of this course, individuals will be able to...

1. **Why** was this guide developed and how did we did it.
2. How the guide can bring organizational **value**: Designated leader for decarbonization strategy
3. Importance of **visibility and understanding** of the regulatory landscape.
4. How to leverage mechanical components within the building and their sources of emissions, to create **line of sight** for building GHG benchmark
5. Importance of building a team with the necessary skillset to **identify and implement changes**
6. The importance of **vision and strategy alignment** with both leadership and tactical teams.
7. Financial feasibility: How to secure outside **funding** to support solution implementation.
8. How the guide can help **assess your** progress against your baseline toward your established journey.

# ELEVATOR SPEECH

The **Healthcare Decarbonization Guide**, developed by the New York Healthcare Protocol (NYHP), is a simple and clear how-to resource that can help any healthcare organization — no matter their size, their budget, or where they are in their decarbonization journey — to formulate a financially viable sustainability plan, that maximizes energy resiliency and delivers top-quality patient care.

# WHAT'S GOING ON?

## CLCPA

New York State's  
Climate Leadership and  
Community Protection Act



## LL97

New York City's  
Local Law 97

# WHAT DOES THIS MEAN FOR HOSPITALS?

Hospitals and other healthcare-related buildings



**8.5%**  
of carbon emissions in U.S.

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**4.4%**  
of carbon emissions worldwide

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# WHAT “DECARBONIZATION” REALLY MEANS

CO<sub>2</sub>

SF<sub>2</sub>

CH<sub>4</sub>

N<sub>2</sub>O

HFC<sub>s</sub>

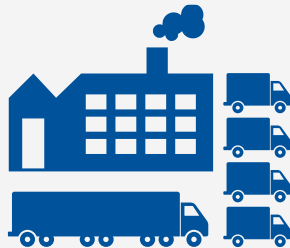
PFC<sub>s</sub>

NF<sub>3</sub>

1

## DIRECT SOURCES

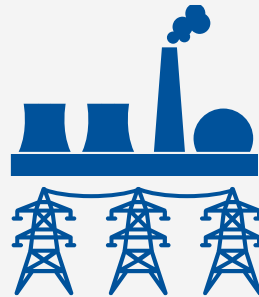
Onsite energy consumption and materials processing from sources controlled by an organization. *(emissions from vehicles, boilers, furnaces, fuel combustion)*



2

## INDIRECT SOURCES

Emissions associated with the purchase of electricity, district steam, heat and cooling.



3

## UPSTREAM AND DOWNSTREAM SOURCES

Transportation and distribution, investments, use of sold products, business travel, end-of-life treatment of sold products.



# DECARBONIZATION IS AN OPPORTUNITY



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## **ENERGY EFFICIENCY**

increases both patient safety and care quality

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## **ADVANCED CONTROL TECHNOLOGIES**

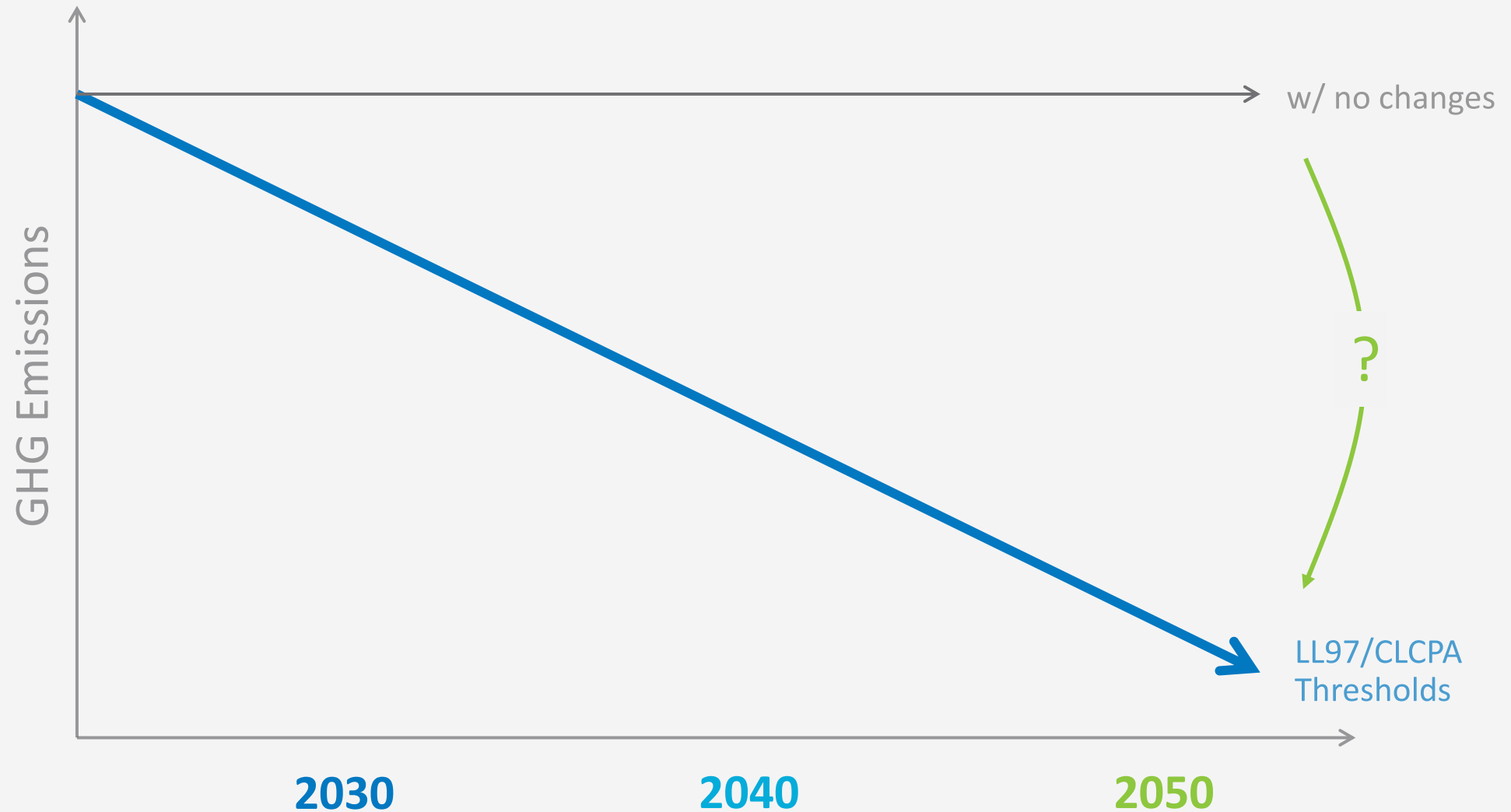
contribute to leaner operations, reduced utility consumption, and lower operating costs

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## **RESILIENCY MEASURES**

provide critical life safety backup in emergency situations

# DO YOU HAVE A PLAN TO REDUCE YOUR GHG EMISSIONS?



# WHAT WE KNOW.



- Turnover
- Prioritization of patient quality of care and resiliency
- Decarbonization projects can be expensive
- Challenges with funding projects
- Capital constraints and difficult return on investment evaluations
- Utility electrical grid decarbonization timeline and coordination can slow progress
- Concerns around the reliability of the electrical grid reliability
- Lack of workforce training to operate and maintain new low-carbon HVAC system solutions
- Technology gaps to replace-in-kind HVAC solutions with existing HVAC system infrastructure
- Building electrical infrastructure limitations for electrification solutions for HVAC systems



**HOSPITALS NEED  
GUIDANCE,  
SUPPORT  
AND RESOURCES.**

BUT WHAT  
SEEMS  
IMPOSSIBLE  
IS DOABLE.

An industry-driven initiative focused on aligning all of healthcare in New York State around the goals of the Climate Leadership and Community Protection Act (CLCPA) and the Climate Mobilization Act (CMA).

# THE NEW YORK HEALTHCARE PROTOCOL

THE PROTOCOL IS COMPRISED OF THREE KEY COMPONENTS:

1

## THE PLEDGE

The commitment of the healthcare sector and New York to work together to decarbonize healthcare facilities as much as possible without sacrificing patient care and resiliency.

2

## THE ROADMAP

A roadmap that clearly identifies target outcomes, best practices implementation timing, barriers, mitigations solutions, innovation pathways, and specific enabling actions needed to achieve them identified.

3

## THE GUIDE

A robust step-by-step guide, complete with resources and tools, that assists healthcare institutions in decarbonizing their facilities by the agreed to date.

# THE STEERING COMMITTEE



Artorius M. Reyes  
Director of Business Development  
**Trane**  
Past-President  
**ASHRAE New York City Chapter**



Joe Berman  
Senior Advisor – Strategic  
Partnerships, LEED AP BD&C  
**NYSERDA**



Adam DeSio  
Commercial Program Lead,  
on-Site Energy Manager  
Program  
**NYSERDA**



Charlie Marino  
CEA - Partner  
**AKF**



Michael C. Taylor  
CEO  
**SchellingPoint**



Collin Barrett  
VP Infrastructure and  
Special Projects  
**Mount Sinai Health System**



John Gaetano  
Assistant VP Facilities  
Management  
**Cayuga Medical Center**



Dona Green  
Senior VP, Strategic Planning  
& Major Capital  
Project Management  
**One Brooklyn Health System**



Kara Brooks,  
MS, LEED AP BD & C  
Senior Associate Director,  
Sustainability  
**ASHE**



Shannon O'Geen  
Founder, Co-Owner  
**Oxygen Group**

# HOW DID WE GET TO THIS POINT



# HOW DID WE GET TO THIS POINT?

# SCHELLINGPOINT STRATEGIC COLLABORATION APPROACH



# SCHELLINGPOINT STRATEGIC COLLABORATION APPROACH

JAN 2023

APRIL 2023

MAY 2023



# THE SOLUTION



The first and primary resource of the New York Healthcare Protocol

A foundational resource for hospital decarbonization and resiliency projects in New York State and beyond.

First-steps assistance and technical guidance to hospitals preparing to meet federal, state and local guidelines.

# WHAT DOES THIS LOOK LIKE?

## PLANNING PROCESS



# WHAT CAN YOU FIND IN THE GUIDE?

HOME  
ABOUT  
OPPORTUNITY  
GET STARTED  
PLANNING PROCESS  
CASE STUDIES  
RESOURCES  
FEEDBACK





## ABOUT

The New York Healthcare Decarbonization Guide is the result of an ongoing industry collaboration between the New York Healthcare Professional (NYHP), the NYHP was led by The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) New York City Chapter, with support from Regional and Society Leadership. This public-private collaboration comprised of over 80 organizations that have contributed their time, energy and expertise to informing the essential components of this guide.



These contributing organizations represent all aspects of the healthcare vertical and include: federal, state, and local agencies, trade and industry groups, representatives from hospitals, healthcare institutions from across New York State, and also professional associations. A complete list of all the contributing organizations can be found below. If your organization would like to get involved in the sponsorship of this resource, please send an email to [support@hospitaldecarbonguide.com](mailto:support@hospitaldecarbonguide.com).


**FOUNDER'S CIRCLE** **ASHRAE LEADERSHIP CIRCLE** **INDUSTRY SUPPORTER**



### Contributors

<p><b>Architecture &amp; Design Firms</b></p> <ul style="list-style-type: none"> <li>Enneki</li> <li>Perkins+WSP</li> <li>STV</li> </ul> <p><b>Government Organizations</b></p> <ul style="list-style-type: none"> <li>Bioscience Resource Labs</li> <li>New York State Department of Environmental Conservation (NYSDEC)</li> <li>New York City Department of Buildings (DOB)</li> <li>New York State Department of Health</li> <li>New York State Department of State</li> <li>New York State Energy Research and Development Authority (NYSERDA)</li> <li>United States Department of Energy</li> </ul> <p><b>Hospitals</b></p> <ul style="list-style-type: none"> <li>Albany Medical Center</li> <li>Cadell Medical Center</li> <li>CHS</li> <li>NYC Anderson</li> <li>Memorial Sloan-Kettering Cancer Center</li> <li>Mount Sinai Medical Center</li> <li>New York Presbyterian</li> <li>Northwell Health</li> <li>NY Presbyterian Hospital</li> <li>NYC Health + Hospitals</li> <li>NYU Westchester</li> <li>NYU Langone Health</li> <li>One Freedom Health System, Inc.</li> <li>University of Rochester</li> <li>Saratoga Hospital</li> <li>South Western Community Hospital (Mt. Sinai)</li> <li>St. Rose's</li> <li>The Woodbury Hospital Center</li> <li>University of Rochester</li> </ul>	<p><b>Consulting Firms</b></p> <ul style="list-style-type: none"> <li>Association of Energy Engineers (AEE)</li> <li>Deloitte</li> <li>Edison Energy</li> <li>Energy 81</li> <li>Greiner Health Care - Canada</li> <li>Hospital Energy</li> <li>IC Energy Consulting, Inc.</li> <li>JRM Associates</li> <li>Kutler-Strony</li> <li>Moran and Gossamer Institute</li> <li>Design Group</li> <li>SchellingPlant</li> <li>Stark Thermal</li> </ul> <p><b>Legal</b></p> <ul style="list-style-type: none"> <li>Gauch White, LLP</li> </ul> <p><b>Manufacturers</b></p> <ul style="list-style-type: none"> <li>Armedstrong Fluid Technology</li> <li>Bathco Associates</li> <li>Arthropur International</li> <li>CarbonQuest</li> <li>Midway Pump</li> <li>Molecular Carbon Systems</li> <li>NPH Builders</li> <li>Pearl Street LED</li> <li>Trane Technologies</li> <li>Vetec</li> </ul> <p><b>Schools &amp; Universities</b></p> <ul style="list-style-type: none"> <li>CUNY Building Performance Lab</li> <li>NYU Tandon School of Engineering</li> <li>Pace College Center</li> <li>SUNY Binghamton College</li> <li>SUNY New York Broome Advanced Energy Center</li> </ul>	<p><b>Engineering Firms</b></p> <ul style="list-style-type: none"> <li>AKF Engineers</li> <li>BE&amp;K</li> <li>ASHRAE</li> <li>Burns Group</li> <li>CNA Consulting Engineers</li> <li>Carlson Engineering</li> <li>GC&amp;I Energy</li> <li>Envi-Engineering</li> <li>HEARTY</li> <li>IBC Engineering</li> <li>JBS</li> <li>Moss MacDonald</li> <li>New Century Engineering</li> <li>Northwell Health</li> <li>OK&amp;A Consulting Engineers</li> <li>PW Group, Inc.</li> <li>Syria Resource Group</li> <li>The PC Group</li> <li>TLC Engineering Solutions</li> <li>Turner Construction</li> <li>Wilson Concess</li> <li>WSP</li> </ul> <p><b>Professional Associations</b></p> <ul style="list-style-type: none"> <li>ASHRAE Valencio</li> <li>ASHRAE</li> <li>Green Building Initiative</li> <li>IBACVS</li> </ul> <p><b>Utility Companies</b></p> <ul style="list-style-type: none"> <li>Con Edison</li> <li>NortheastGrid</li> </ul>
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HOME  
ABOUT  
OPPORTUNITY  
GET STARTED  
PLANNING PROCESS  
CASE STUDIES  
RESOURCES  
FEEDBACK



## PLANNING PROCESS

The following 8-step process will help you to develop a comprehensive decarbonization and resilience plan for your institution. Each step contains quick-reference links that will allow you to skip directly to the resources that we have available for that step. We encourage you to read the content below in its entirety and follow the steps in order.

There is no "one size fits all" approach to decarbonization strategy development, and every hospital will approach this work in its own unique way. Your facility may have already taken some steps toward decarbonization. Even if that's the case, this guide – which is based on project management best practices – should still be helpful to you.

<p><b>STEP 1</b></p> <p><b>Designate an Initiative Leader</b></p> <p>To successfully execute your decarbonization effort, an initiative leader (an executive, sponsor or director) will be needed. This person or persons will orchestrate the project as well as champion it at...</p> <p><a href="#">learn more</a></p>	<p><b>STEP 2</b></p> <p><b>Understand the Regulatory Landscape</b></p> <p>Before you begin, it will be important to know what your hospital's obligations are within the current regulatory landscape and what regulations may affect your institution in the foreseeable future.</p> <p><a href="#">learn more</a></p>	<p><b>STEP 3</b></p> <p><b>Establish your Baselines</b></p> <p>A scan the current state of your facility portfolio and its supporting infrastructure, its status on the road to decarbonization, and how it compares to peer institutions undertaking similar efforts around the State.</p> <p><a href="#">learn more</a></p>	<p><b>STEP 4</b></p> <p><b>Gather your Team</b></p> <p>Identify the key people within your organization who will help build the plan, secure the necessary approvals, and then successfully implement and maintain your strategy over time. Assign initial roles and responsibilities.</p> <p><a href="#">learn more</a></p>
<p><b>STEP 5</b></p> <p><b>Set your Project Vision</b></p> <p>What are the primary value drivers of your initiative? What do you want, need, and expect to accomplish in co-developing and implementing a decarbonization and resiliency strategy?...</p> <p><a href="#">learn more</a></p>	<p><b>STEP 6</b></p> <p><b>Secure Funding</b></p> <p>You've set your high-level plan, now explore the available resources to help you cost-effectively implement your strategy. In this section of the guide, you will find a reference library of potential...</p> <p><a href="#">learn more</a></p>	<p><b>STEP 7</b></p> <p><b>Implement</b></p> <p>How do you get your people, made your plan, and secured the funding it'll take to get it all done. It's time to set to work. This section will walk you through what implementation looks like at a high level.</p> <p><a href="#">learn more</a></p>	<p><b>STEP 8</b></p> <p><b>Measure &amp; Verify</b></p> <p>As projects are completed it's going to be important to track results, report them where appropriate, and publicize what has been accomplished to your stakeholders and the media. This section contains tools to help with all of that.</p> <p><a href="#">learn more</a></p>

## BACKGROUND

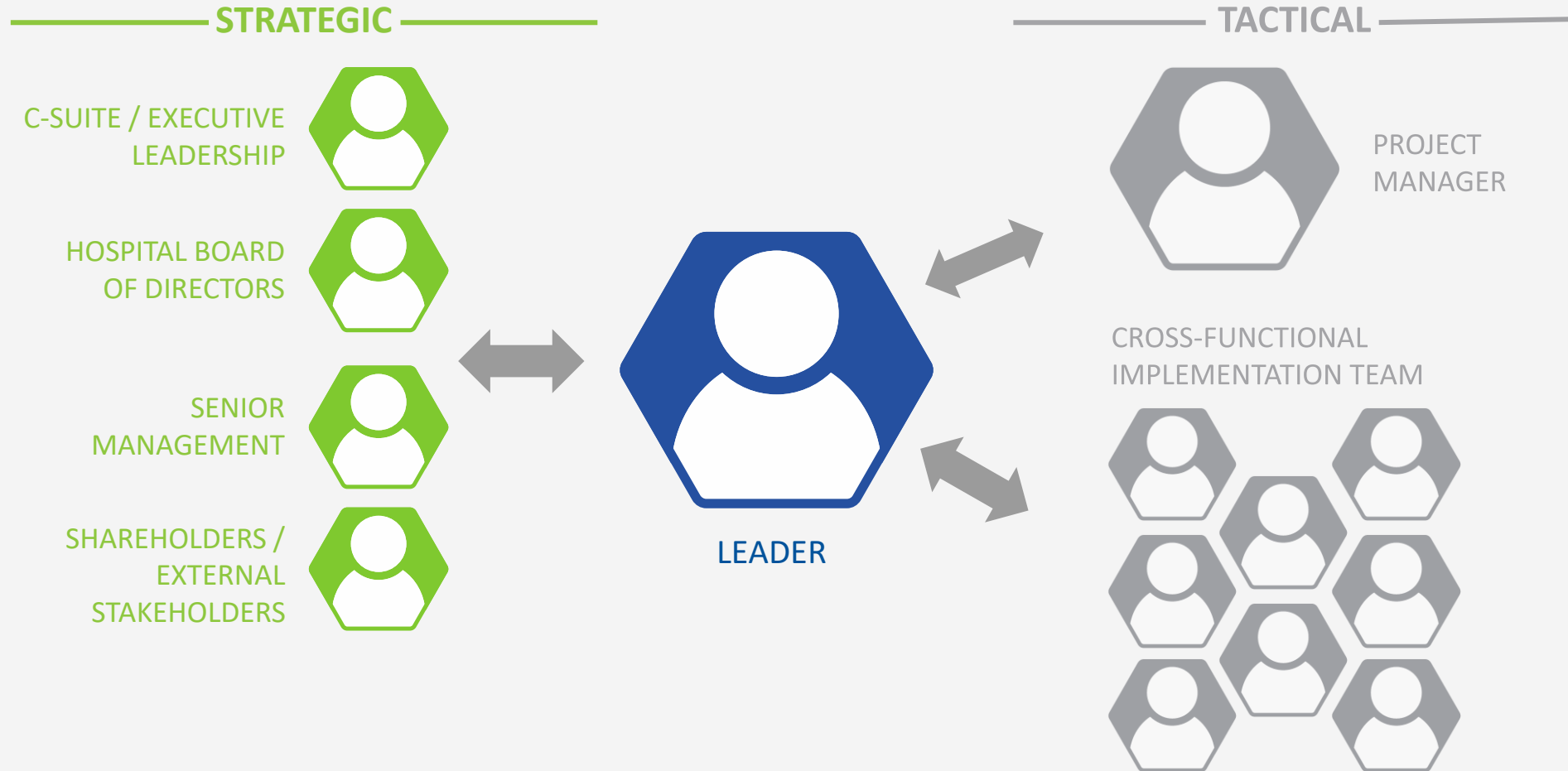
About  
Opportunity  
Getting Started

## PLANNING PROCESS

## CASE STUDIES

## RESOURCES

# DESIGNATE AN INITIATIVE LEADER



## UNDERSTAND THE REGULATORY LANDSCAPE

### FEDERAL

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Biden Administration  
“National Climate Task Force”

GOAL: reduce U.S.  
greenhouse gas emissions

- 50-52% below 2005 levels in 2030
- 100% carbon pollution-free electricity by 2035
- net-zero by 2050

### STATE

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Climate Act or CLCPA

New York State’s Climate  
Leadership and Community  
Protection Act

GOAL: reduce economy-wide  
greenhouse gas emissions

- 40 % by 2030
- No less than 85% by 2050 from 1990 levels

### LOCAL

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Local Law 97 (LL97)  
GOAL: make New York City  
carbon neutral by 2050

*LL11 (facade), LL88 (lighting  
and sub metering), LL84, LL87*



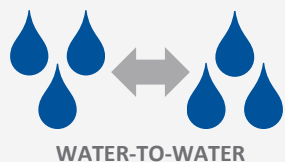
Codes & Requirements



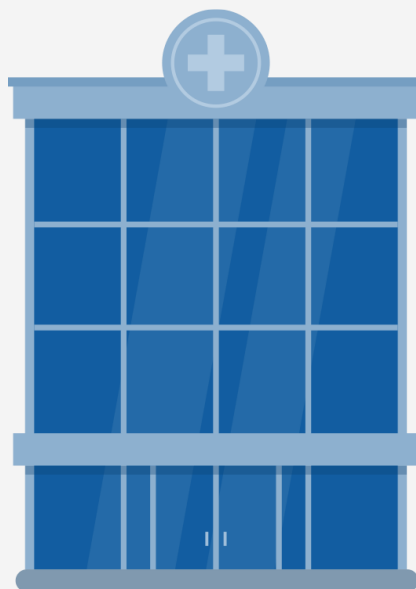
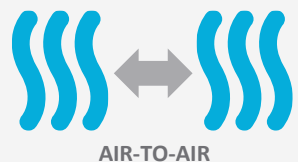
Code/Policy Changes

### ESTABLISH YOUR BASELINES

#### TAKING INVENTORY



#### TYPES OF HVAC SYSTEMS



#### ESTABLISH BASELINE

- HVAC
- +
- Energy
- +
- Lighting
- +
- Utilities
- +
- Telecom

**Total  
Current  
GHG  
Emissions**

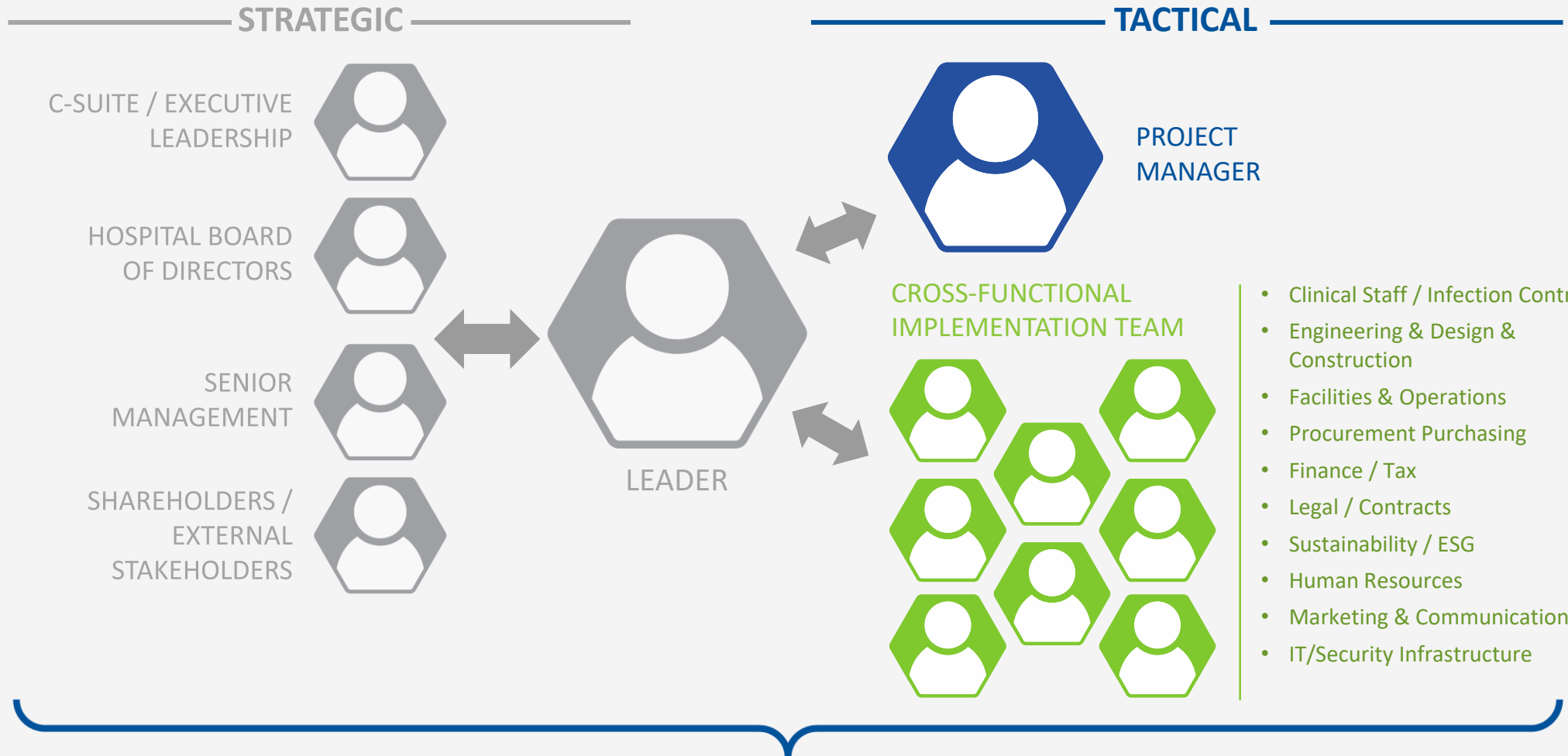


HVAC System Design Schematics



Decarbonize with Resilience Baseline Survey

### GATHER YOUR TEAM



- Clinical Staff / Infection Control
- Engineering & Design & Construction
- Facilities & Operations
- Procurement Purchasing
- Finance / Tax
- Legal / Contracts
- Sustainability / ESG
- Human Resources
- Marketing & Communications
- IT/Security Infrastructure

1

2

3

4

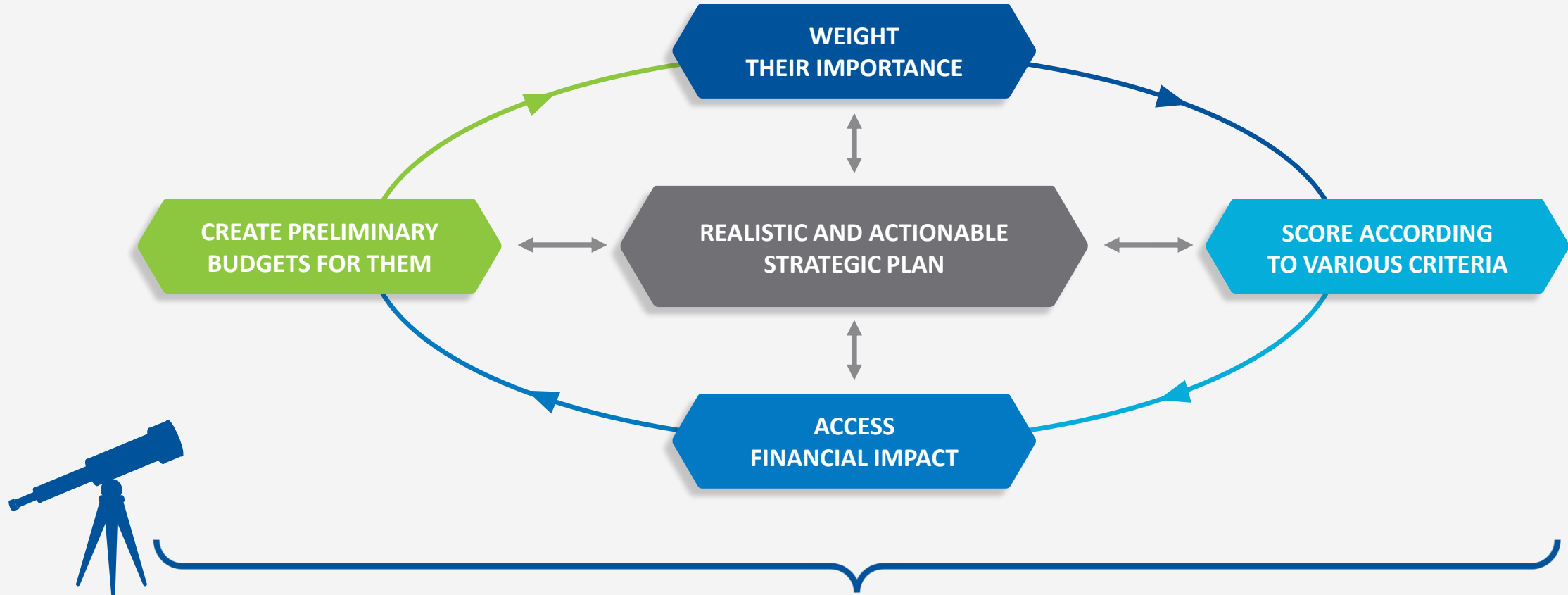
5

6

7

8

### SET VISION & MAP STRATEGY



Decision-Making Matrix

## SET VISION & MAP STRATEGY

### Project Scoring

Select Project Type

Enter Project Name

NewConstruction

Addition Option #2

Project Type	Project Name	CRITERIA	FACTORS	Scoring Cue (Select)	Weighted Score
NewConstruction	Addition Option #2	Education & Training	Education & Training	0 = NA	0.00%
		Project Financial Data	Budget Cost	2 = \$1MM - \$2.5MM	0.75%
			Incentive Dollars Included	3 = \$1MM - \$2.5MM	11.25%
			Payback (Years)	3 = 1-2 years	4.50%
			IRR (Percentage)	4 = Greater than 10%	4.50%
			Implementation Duration	3 = 6-12 mo.	2.25%
		Institutional Financial Impact	Cash On Hand (Days)	3 = Medium	3.75%
			Net Operating Margin	3 = Medium	3.45%
			Cashflow Impact	2 = Low	1.70%
			Utility Cost Change (Electricity)	3 = Medium	2.25%
			Fuel Cost Change (Steam, Oil, etc.)	3 = Medium	1.50%
		Organizational Business Objectives	Water Consumption Change	3 = Medium	1.50%
			Patient Safety Impact	4 = High	3.00%
			Patient Experience	4 = High	3.00%
			Community Service/Outcomes Impact	2 = Low	1.50%
			Strategic Initiatives Alignment	2 = Low	1.50%
		Facility Operation & Resiliency Objectives	Staffing Efficiency (Nurse/Clinician/Support Ratio)	4 = High	2.25%
			Revenue Generation Impact	4 = High	0.75%
			Energy Demand Change	3 = Medium	1.88%
			Energy Consumption Change	3 = Medium	1.88%
			Total Cost Avoidance	3 = Medium	1.50%
		Facility Carbon Emissions Impact	Fossil Fuel Consumption Change	4 = High	2.00%
			Utility / Power Interruption Prevention + Extreme Weather Protection	3 = Medium	0.75%
		Regulatory Compliance	Facility Carbon Emissions Impact	4 = High	10.00%
		Regulatory Compliance	Federal	4 = High	4.00%
			State	3 = Medium	2.63%
			City/Local	3 = Medium	1.88%

Addition Option #2 Score

75.90%

## SET VISION & MAP STRATEGY

### Scoring Criteria, Factors, Weights

		Weightage	Rating Cues				
Criteria	Education & Training	5%					
	Project Financial Data	30%					
	Institutional Financial Impact	20%					
	Organizational Business Objectives	15%					
	Facility Operation & Resiliency Objectives	10%					
	Facility Carbon Emissions Impact	10%					
	Regulatory Compliance Score	10%					
		<i>max</i>					
		100%					
		Weightage	Rating Cues				
Education & Training Factor	Training course	100%	0 = NA	1 = Nominal	2 = Low	3 = Medium	4 = High
		Weightage	Rating Cues				
Project Financial Data Factors	Budget Cost	5%	0 = NA	1 = Greater than \$2.5MM	2 = \$1MM - \$2.5MM	3 = \$500K - \$999K	4 = \$1 to \$499K
	Incentive Dollars Included	50%	0 = NA	1 = \$1 to \$499K	2 = \$500K - \$999K	3 = \$1MM - \$2.5MM	4 = Greater than \$2.5MM
	Payback (Years)	20%	0 = NA	1 = Greater than 3 years	2 = 2-3 years	3 = 1-2 years	4 = less 1 year
	IRR (Percentage)	15%	0 = NA	1 = Less than 5%	2 = 5%-7.5%	3 = 7.6%-10%	4 = Greater than 10%
	Implementation Duration	10%	0 = NA	1 = Greater than 24 mo.	2 = 12-24 mo.	3 = 6-12 mo.	4 = Less than 6 mo.
		<i>max</i>					
		100%					
		Weightage	Rating Cues				
Institutional Financial Impact Factors	Cash On Hand (Days)	25%	0 = NA	1 = High	2 = Medium	3 = Low	4 = Nominal
	Net Operating Margin	23%	0 = NA	1 = High	2 = Medium	3 = Low	4 = Nominal
	Cashflow Impact	17%	0 = NA	1 = High	2 = Medium	3 = Low	4 = Nominal
	Utility Cost Change (Electricity)	15%	0 = NA	1 = Nominal	2 = Low	3 = Medium	4 = High
	Fuel Cost Change (Steam, Oil, etc.)	10%	0 = NA	1 = Nominal	2 = Low	3 = Medium	4 = High

## SET VISION & MAP STRATEGY

### Project Comparisons

Select projects to compare.

	Wgtd. Score
<b>Education &amp; Training</b>	
Education & Training	5.00%
<b>Facility Carbon Emissions Impact</b>	
Facility Carbon Emissions Impact	0.00%
<b>Facility Operation &amp; Resiliency Objectives</b>	
Energy Consumption Change	0.00%
Energy Demand Change	0.00%
Fossil Fuel Consumption Change	0.00%
Total Cost Avoidance	0.50%
Utility / Power Interruption Prevention + Extreme Weather Protection	0.00%
<b>Institutional Financial Impact</b>	
Cash On Hand (Days)	5.00%
Cashflow Impact	0.85%
Fuel Cost Change (Steam, Oil, etc.)	0.00%
Net Operating Margin	4.60%
Utility Cost Change (Electricity)	0.00%
Water Consumption Change	0.00%
<b>Organizational Business Objectives</b>	
Community Service/Outcomes Impact	2.25%
Patient Experience	3.00%
Patient Safety Impact	3.00%
Revenue Generation Impact	0.56%
Staffing Efficiency (Nurse/Clinician/Support Ratio)	1.69%
Strategic Initiatives Alignment	1.50%
<b>Project Financial Data</b>	
Budget Cost	1.50%
Implementation Duration	0.00%
Incentive Dollars Included	3.75%
IRR (Percentage)	1.13%
Payback (Years)	6.00%
<b>Regulatory Compliance</b>	
City/Local	0.00%
Federal	1.00%
State	0.00%
<b>Grand Total</b>	<b>41.33%</b>

	Wgtd. Score
<b>Education &amp; Training</b>	
Education & Training	0.00%
<b>Facility Carbon Emissions Impact</b>	
Facility Carbon Emissions Impact	10.00%
<b>Facility Operation &amp; Resiliency Objectives</b>	
Energy Consumption Change	1.88%
Energy Demand Change	1.88%
Fossil Fuel Consumption Change	2.00%
Total Cost Avoidance	1.50%
Utility / Power Interruption Prevention + Extreme Weather Protection	0.75%
<b>Institutional Financial Impact</b>	
Cash On Hand (Days)	3.75%
Cashflow Impact	1.70%
Fuel Cost Change (Steam, Oil, etc.)	1.50%
Net Operating Margin	3.45%
Utility Cost Change (Electricity)	2.25%
Water Consumption Change	1.50%
<b>Organizational Business Objectives</b>	
Community Service/Outcomes Impact	1.50%
Patient Experience	3.00%
Patient Safety Impact	3.00%
Revenue Generation Impact	0.75%
Staffing Efficiency (Nurse/Clinician/Support Ratio)	2.25%
Strategic Initiatives Alignment	1.50%
<b>Project Financial Data</b>	
Budget Cost	0.75%
Implementation Duration	2.25%
Incentive Dollars Included	7.50%
IRR (Percentage)	4.50%
Payback (Years)	4.50%
<b>Regulatory Compliance</b>	
City/Local	1.88%
Federal	4.00%
State	2.63%
<b>Grand Total</b>	<b>72.15%</b>

	Sum of Column1
<b>Education &amp; Training</b>	
Education & Training	0.00%
<b>Facility Carbon Emissions Impact</b>	
Facility Carbon Emissions Impact	10.00%
<b>Facility Operation &amp; Resiliency Objectives</b>	
Energy Consumption Change	1.88%
Energy Demand Change	2.50%
Fossil Fuel Consumption Change	0.50%
Total Cost Avoidance	1.50%
Utility / Power Interruption Prevention + Extreme Weather Protection	1.00%
<b>Institutional Financial Impact</b>	
Cash On Hand (Days)	5.00%
Cashflow Impact	3.40%
Fuel Cost Change (Steam, Oil, etc.)	0.50%
Net Operating Margin	3.45%
Utility Cost Change (Electricity)	0.75%
Water Consumption Change	0.50%
<b>Organizational Business Objectives</b>	
Community Service/Outcomes Impact	2.25%
Patient Experience	3.00%
Patient Safety Impact	3.00%
Revenue Generation Impact	0.75%
Staffing Efficiency (Nurse/Clinician/Support Ratio)	2.25%
Strategic Initiatives Alignment	3.00%
<b>Project Financial Data</b>	
Budget Cost	0.38%
Implementation Duration	0.75%
Incentive Dollars Included	7.50%
IRR (Percentage)	3.38%
Payback (Years)	1.50%
<b>Regulatory Compliance</b>	
City/Local	1.25%
Federal	3.00%
State	3.50%
<b>Grand Total</b>	<b>66.48%</b>

1

2

3

4

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6

7

8

SECURE FUNDING



1

2

3

4

5

6

7

8

IMPLEMENT



1

2

3

4

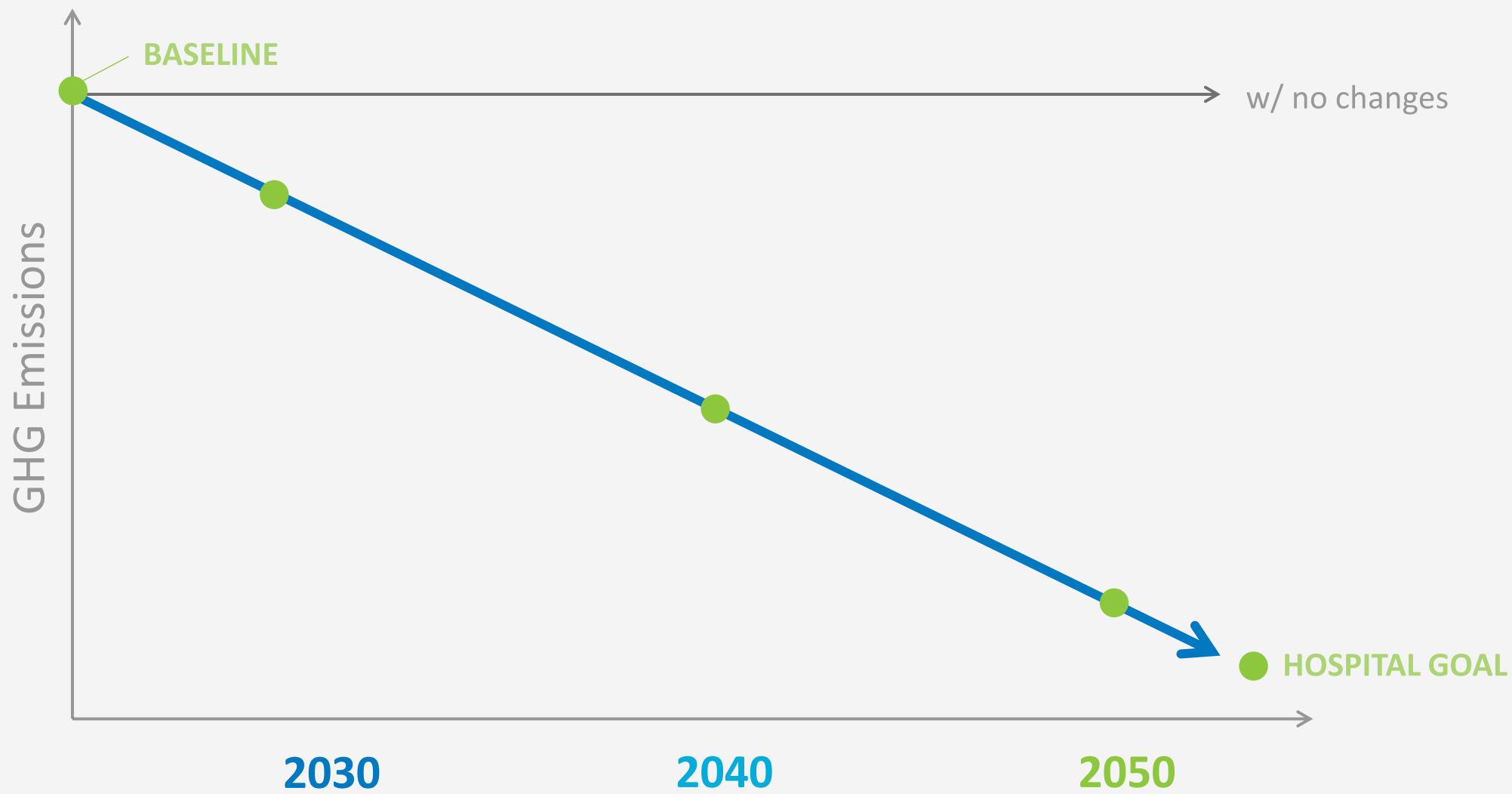
5

6

7

8

MEASUREMENT & VERIFICATION



**NEXT STEPS ▶**

# NEXT STEPS

WHERE WE ARE TODAY

Next Steps - 2024

Sustainable Hospital of the Future

Established the  
"Pledge"

Pathway for  
hospitals to begin  
their journey

Identified where decarb  
& resiliency compete  
or complement each  
other

**20 of 101  
Action Items Complete**

Prioritization of Next  
Cohort of Action Items  
(MVP-2)

Scope, Timeline, Budget  
(MVP-2)

Hospital Pilot Coordination

# NEXT STEPS

WHERE WE ARE TODAY

Next Steps - 2024



Sustainable Hospital of the Future

- NYHP Core Team Members
  - Evaluate Remaining 81 Action Items give prioritization input.
- NYHP Steering Committee
  - Incorporate Core Team Input Into MVP-2 Action Items List

Q&A

**Artorius M. Reyes**  
artorius.m.reyes@trane.com

**Adam DeSio**  
adam.desio@nysenda.ny.gov



**THANK YOU**