

# Decarbonization: Ambition to Action

IECA Panel: GHG Reduction Options for  
Manufacturing

October 23, 2024



# Global challenges making decarbonization the #1 strategic topic



## Regulatory Requirements

Lower emissions **by 50%** this decade and reach **net zero** by 2050

Source: [BCG](#)



## Funding incentives and financial risks

**Capital** raised for funds related to ESG **tripled** between 2019 and 2022

Source: [McKinsey](#)



## Customer Expectations

**Customers** are expecting sustainable products and operations

# Our **DEGREE** Framework – A 360° View on Siemens Priorities in our Business and our own Operations

**D** – Decarbonization

**E** – Ethics

**G** – Governance

**R** – Resource efficiency

**E** – Equity

**E** – Employability

## **Customer value propositions:**

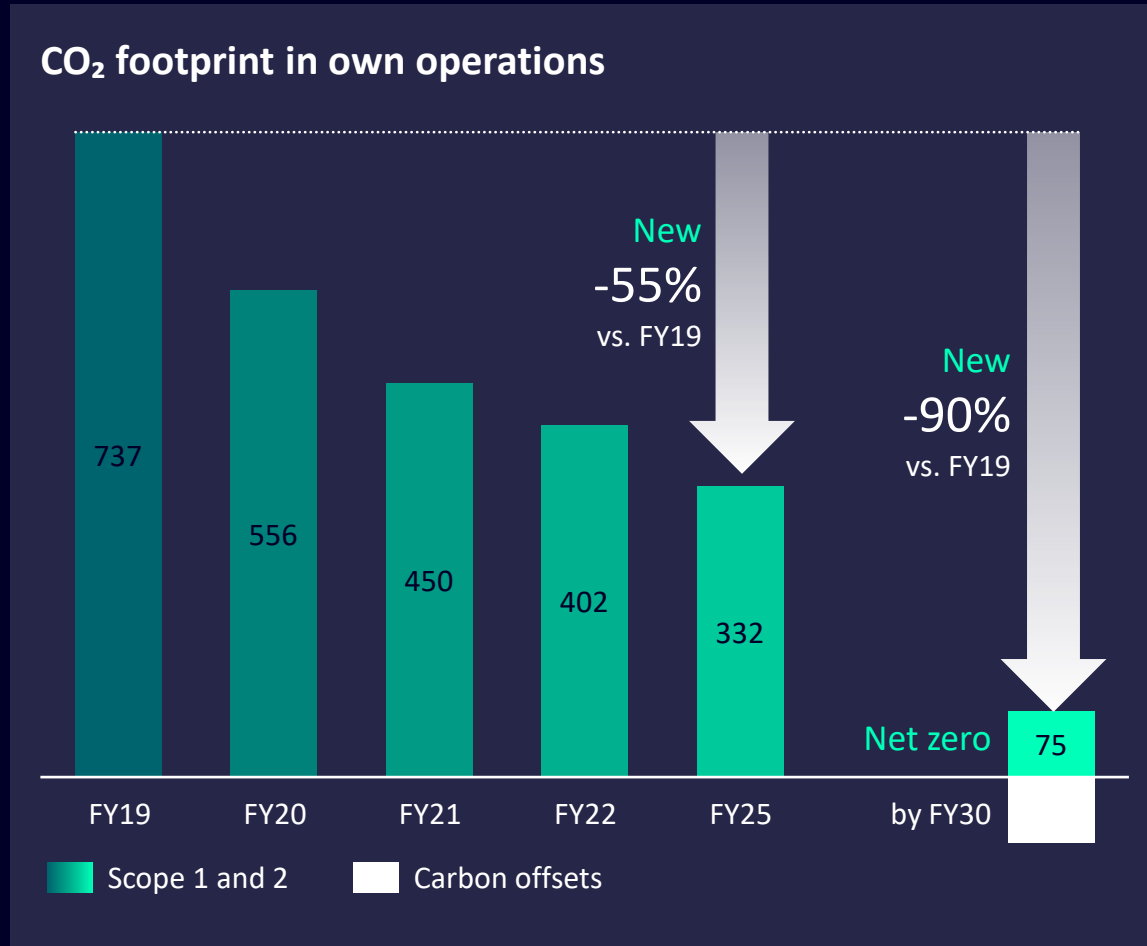
Decarbonization  
& energy efficiency

Resource efficiency  
& circularity

People centricity  
& societal impact

# Siemens Net Zero Commitment

We are accelerating CO<sub>2</sub> emission reductions in own operations



## We accelerate the emission reduction pathway (w/o SHS)

New	Introduction of new FY25 reduction target of -55%	DEGREE target
New	More ambitious FY30 reduction target of -90%	
✓	CO <sub>2</sub> footprint reduced by 46% from FY19 to FY22	
✓	Already 37 Siemens locations with net zero CO <sub>2</sub> emissions	
New	Invest of ~€650m in operational decarbonization between FY22–FY30 (for fleet electrification, buildings, and production emissions)	

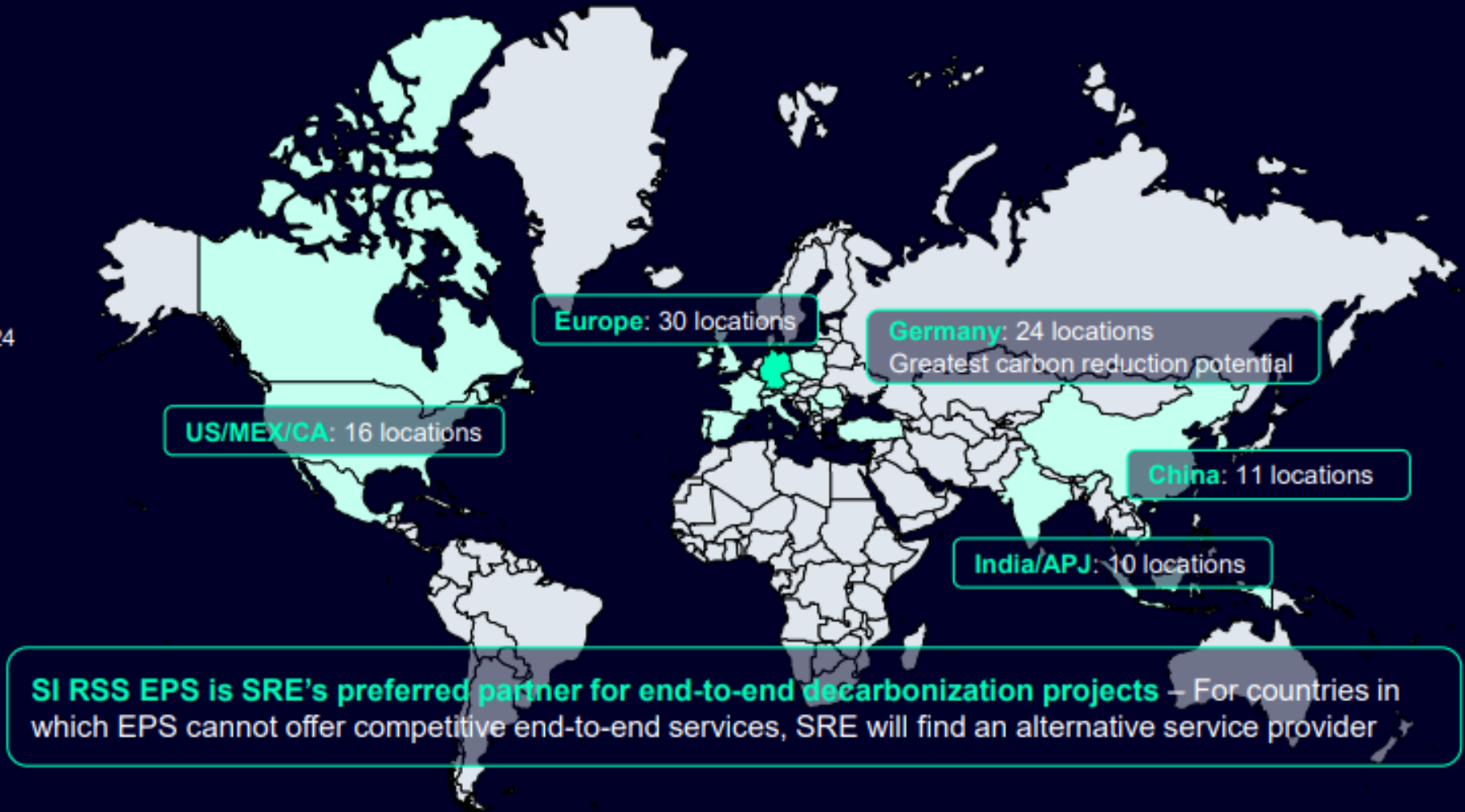
## We maintain our existing commitments for Siemens (w/ SHS)

✓	Approved SBTi Net Zero target (2024)	SCIENCE BASED TARGETS DRIVING AMBITIOUS CORPORATE CLIMATE ACTION
✓	100% electrical vehicles, 100% renewable energy, and 100% net zero buildings by 2030	CLIMATE GROUP EP100 CLIMATE GROUP EV100 RE100 CLIMATE GROUP
✓	2015 Carbon-neutral commitment by 2030	

# BOLD 2030 – Program to Achieve Net Zero Carbon Operations by 2030

## Transformation scope

91	Project locations: <ul style="list-style-type: none"><li>– 21 DI</li><li>– 31 SI</li><li>– 17 SMO</li><li>– 22 Multi / Others</li></ul>
23	Countries
23	Projects to start 23/24
91	Energy efficiency
50	Electrification
60	PV projects
71	kt/a CO <sub>2</sub> to reduce
>100' €	



# We can accelerate our decarbonization ambitions ... because we are power users of our own portfolio



## GRAND PRAIRIE, TX

### Turning brownfield into green factories

- One of nation's first all-electric powder coating paint line
- The new paint line reduces the facility's gas consumption up to 90% without disruption
- Landfill-free site, producing electricity via thermal energy from incinerated waste
- Other improvements being piloted include powder chemistry, heat reuse, and material characteristics



## SACRAMENTO AND POMONA, CA

### Powering operations with the sun

- Sacramento headquarters now powers 75% of the rail manufacturing hub with solar PV
- 2.1 MW solar project over 60+ acres
- Additionally, Siemens new greenfield facility in Pomona will also run 25% of operations via solar power once fully operational in 2025.



## BROKEN ARROW, OK

### Energy efficiency upgrades

- Performed LED lighting retrofits
- Replaced older HVAC systems and aging compressors with more efficient ones
- Energy projects at Siemens USA facilities have supported decarbonization with ROI:
  - >11,000 MWh of energy saved over the last three years
  - 8,200 tons of CO2 since 2021

We support our customers across their digital transformation and help drive outcomes to improve their business

## Decarbonization & energy efficiency



- End-to-end decarbonization services / sustainability programs
- Building energy efficiency
- Energy resiliency & energy security

Energy and Performance Services

## Reliable and cost-efficient operation



- Building automation
- Building space utilization
- Asset performance & protection
- Electrical and mechanical services

Building Services

## People centric places



- Healthy indoor climates
- Safety and security
- Interaction of building users with building features

Smart Building Solutions

# Decarbonization Levers – Achieve Targets, Manage Costs, & Build Resiliency

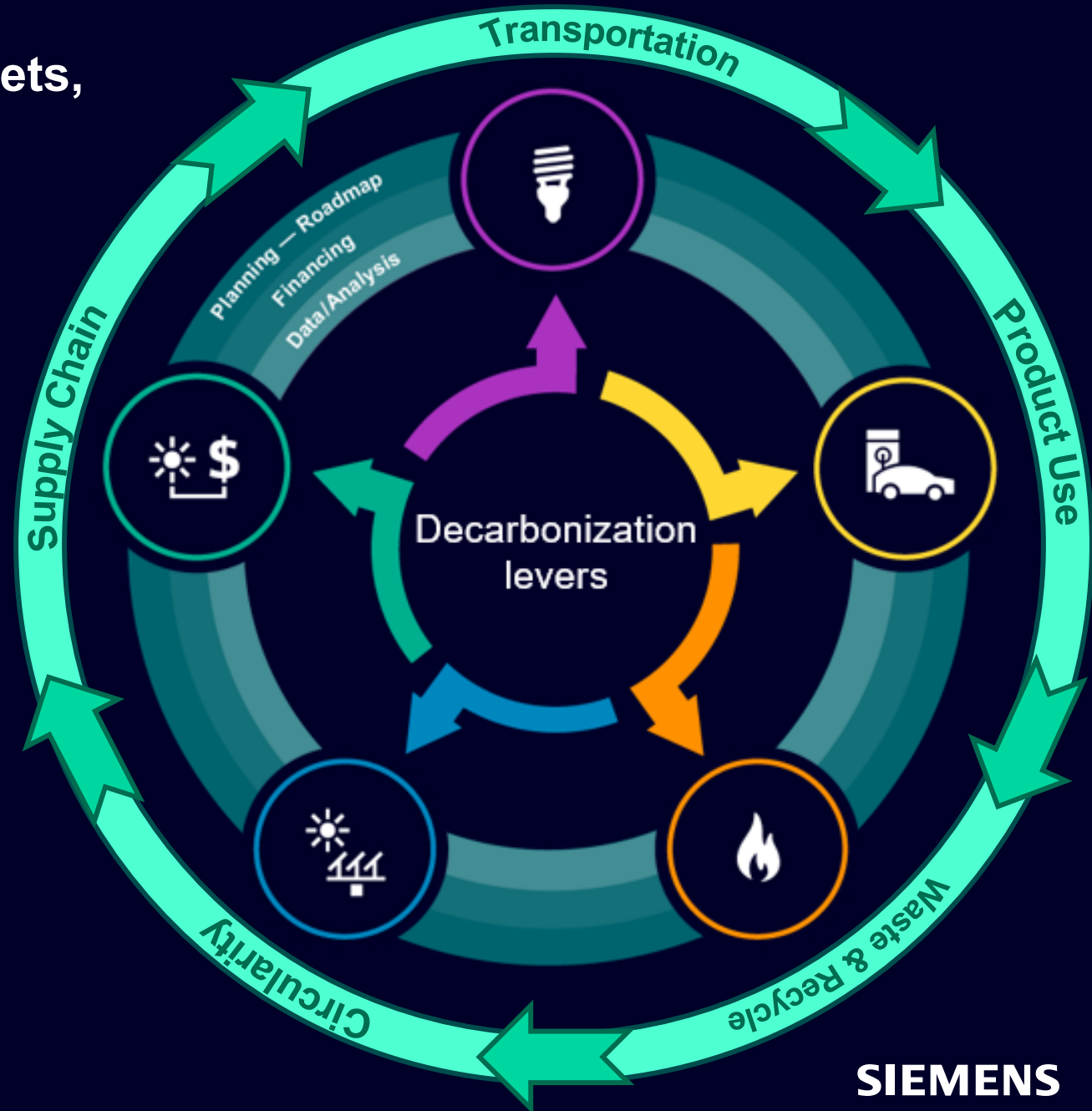
Decarbonization requires strategic planning, systems thinking, digitalization and stakeholder collaboration.

## Core Decarbonization Levers:

1. Reduce consumption
2. Electrification
3. Manage thermal loads
4. Energy generation / storage
5. Clean energy sourcing

Own Operations

**Lever 6 (Scope 3)**  
Expectations now extend beyond an organization's own operations:  
• Value chain management





# Sustainability & Energy Management Consulting

## Decarbonizing Infrastructure Journey

### Strategy Setting and Baselineing

#### ESG Strategy

- Stakeholder Alignment
- SBTi Target Development
- ESG Target Development
- Glidepath Modelling
- Technology Roadmaps
- Materiality Assessments

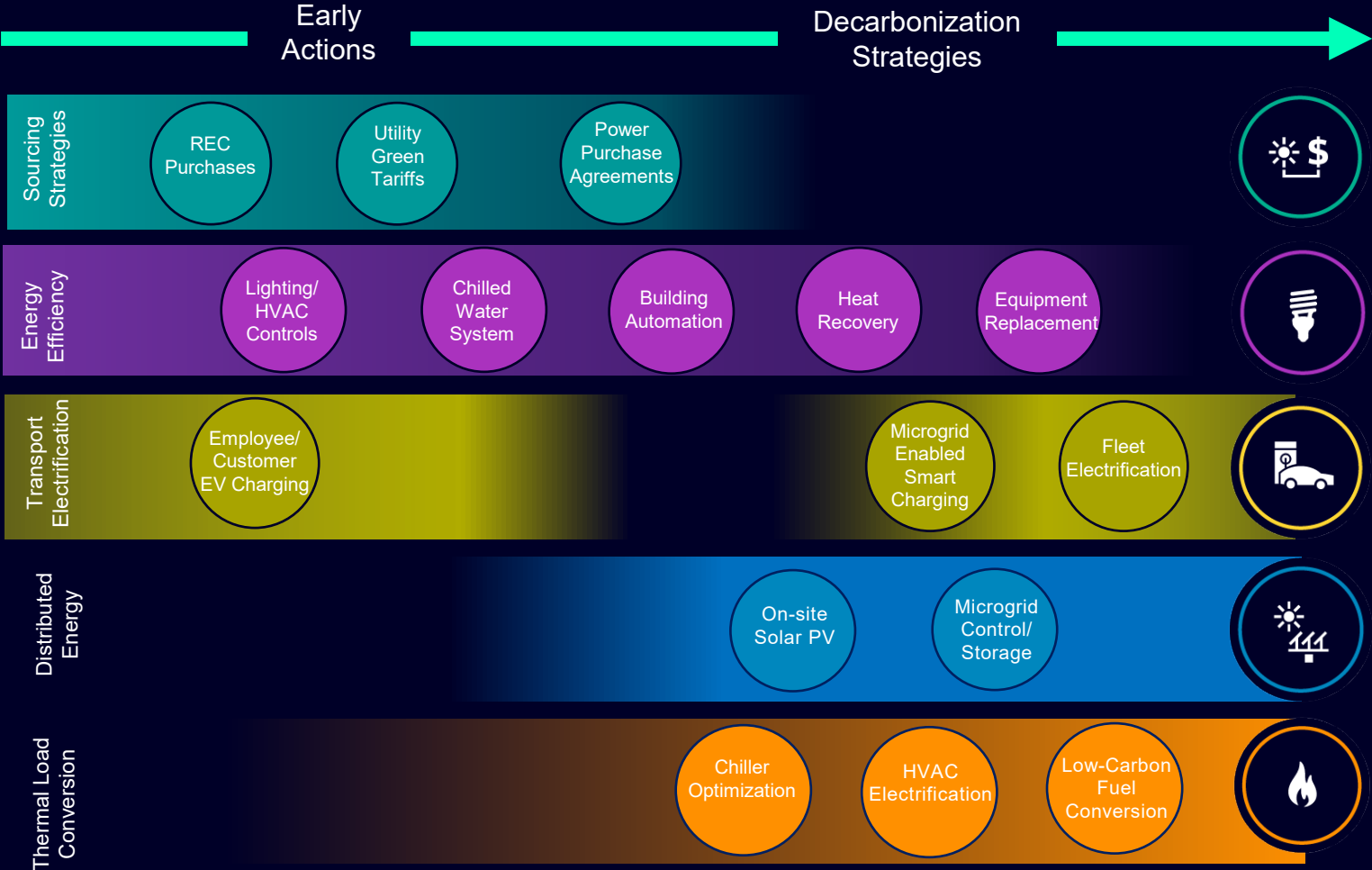
#### Baselineing

- Utility Bill Review
- Peer Analysis
- Internal Benchmarking
- Energy Audits
- Energy and Carbon Analytics
- Biodiversity Risk Screening
- Water Risk screening

### Strategy to Action "Bridge"

-  Digitalization / Data Capture
-  Implementation Partners
-  Funding & Financing

### Strategy Implementation



# Decarbonization Strategy & Glidepath Development

## Proven Decarbonization Planning Process



ESG target and priority alignment, baseline & benchmarking



Identify, evaluate and prioritize decarbonization actions

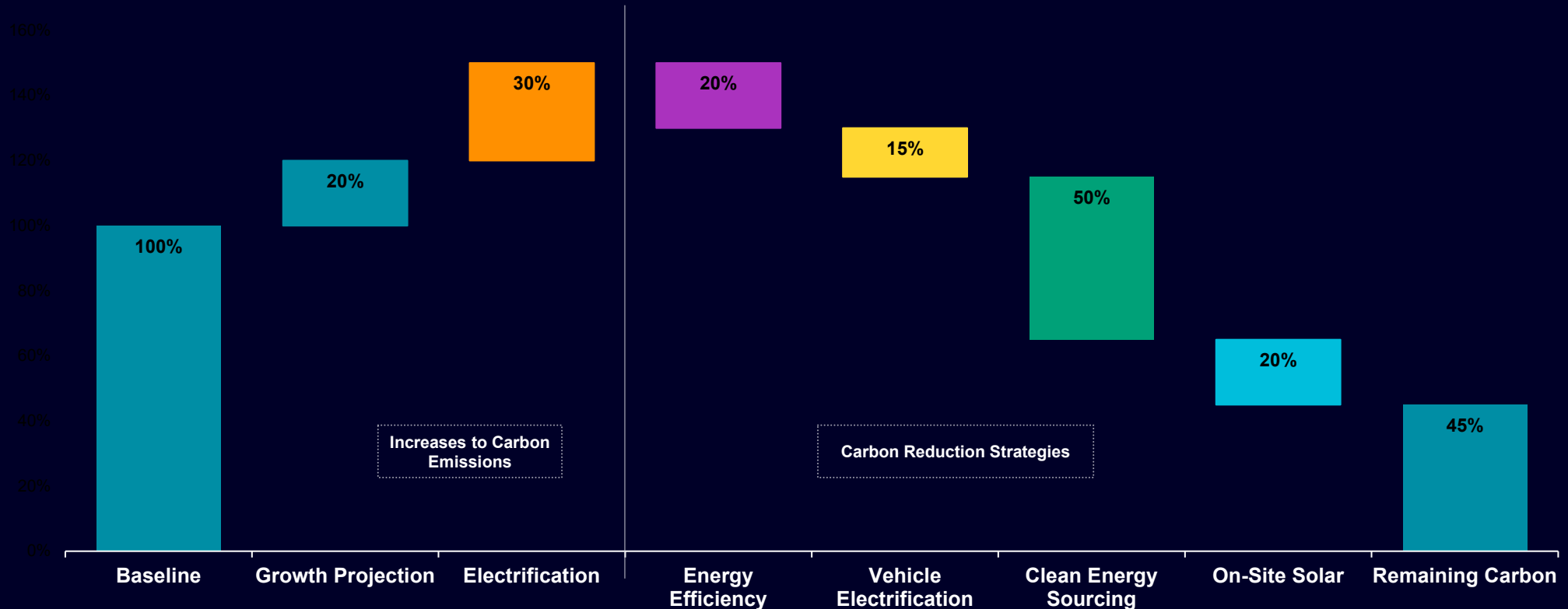


Establish scenario-based strategies & executive summary

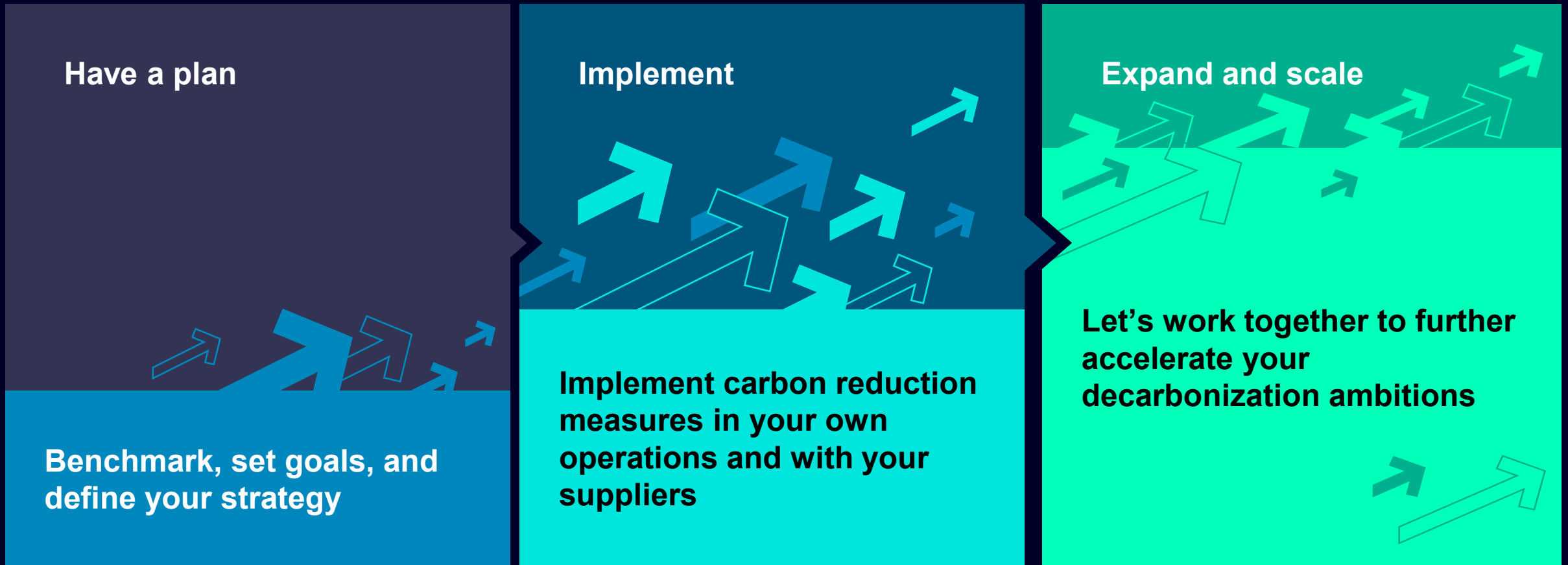


Implementation plan & ongoing support

### Representative Decarbonization Glidepath Model



# Are you ready to join us in the race towards net zero?



**Let's scale our sustainability impact together!**

# I Thank you



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